$\Delta_{1}^{\#1}{}_{lphaeta}$ $\Delta_{1}^{\#2}{}_{lphaeta}$ $\Delta_{1}^{\#3}{}_{lphaeta}$ $\Delta_{1}^{\#6}{}_{lpha}$ $\Delta_{1-\alpha}^{\#1}$ $\Delta_{1}^{\#2}$ α $\Delta_{1}^{\#4}$ α $\frac{4}{3} \left(-\frac{1}{a_0 + 4a_1 - 4a_2} + (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9) \right)$ $\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)\right)$ $\frac{4 \left(2 \, a_{1} + a_{2} + a_{9}\right)}{3 \left(a_{0}^{2} + \left(2 \, a_{1} + a_{2}\right) \left(2 \, a_{1} + a_{2} + 3 \, a_{3} - 16 \, a_{6} + 4 \, a_{7}\right) - a_{9}^{2} - a_{0} \left(6 \, a_{1} + 3 \, a_{2} + 3 \, a_{3} - 16 \, a_{6} + 4 \, a_{7} + 2 \, a_{9}\right)\right)}{3 \left(a_{1}^{2} + \left(2 \, a_{1} + a_{2}\right) \left(2 \, a_{1} + a_{2} + 3 \, a_{3} - 16 \, a_{6} + 4 \, a_{7} + 2 \, a_{9}\right)\right)}$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)\right)$ $-\frac{2}{3(a_0+4a_1-4a_2)}$ + (8 (a₀-4a₁-2a₂-3a₃+16a₆-4a₇-2a₉))/ $-((4\sqrt{2}(2a_1+a_2+a_9))/$ $(3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 (a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ $(3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ $a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))))$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $-((4\sqrt{2}(2a_1+a_2+a_9))/$ $\frac{4(a_0-2a_1-a_2)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$ $\frac{4 (2 a_1 + a_2 + a_9)}{3 (a_0^2 + (2 a_1 + a_2) (2 a_1 + a_2 + 3 a_3 - 16 a_6 + 4 a_7) - a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))}$ $(3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2$ $a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))))$ $(4\sqrt{2}(3a_0^2-4a_1^2-a_2^2-3a_3(3a_3+4(-4a_6+a_7)) 6a_3a_9-a_9^2-2a_2(3a_3+a_9)-4a_1(a_2+3a_3+a_9)$ $\frac{4}{3} \left(-\frac{2}{2a_0+2a_1+a_2+3a_3} + (a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9) \right)$ $-((4(2a_1+a_2+a_9))/$ $4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)$ $6a_0(2a_1+a_2+a_3-8a_6+2a_7+a_9)))/$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) (a_0^2 + (2a_1 + a_2) (2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0 (6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$ $(3(2a_0 + 2a_1 + a_2 + 3a_3)$ $\frac{3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))}{3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))}$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9)))) $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $(4\sqrt{2}(3a_0^2-4a_1^2-a_2^2-3a_3(3a_3+4(-4a_6+a_7)) 6a_3a_9-a_9^2-2a_2(3a_3+a_9)-4a_1(a_2+3a_3+a_9) -((4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)))/$ $\frac{4}{3(2a_0+2a_1+a_2+3a_3)} + (8(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9))/$ $(8(2a_1+a_2+a_9))/$ $6a_0(2a_1+a_2+a_3-8a_6+2a_7+a_9)))/$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) (3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) (3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 (3(2a_0+2a_1+a_2+3a_3)$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7)$ $a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))))$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $\sqrt{5}$ $\frac{18(a_0+4a_6-4a_7)}{18(a_0+a_6-4a_7)}$ $18(a_0+4a_6-4a_7)$ $\begin{array}{|c|c|c|c|c|c|} \hline \sqrt{5} & & & \\ \hline 18 (a_0 + 4 a_6 - 4 a_7) & & & \\ \hline -18 (a_0 + 4 a_6) + 72 a_7 \end{array}$ $(8(2a_1+a_2+a_9))/$ $4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)$ $\frac{8(a_0-2a_1-a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))} = \frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) \frac{1}{3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))}{3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))}$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))) $-((4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9))/$ $-((4(2a_1+a_2+a_9))/$ $\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))} \frac{4(a_0-2a_1-a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) (3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2$ a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9)))) $a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))))$

	$\Gamma_{1}^{\#1}{}_{lphaeta}$	$\Gamma_{1}^{\#2}_{lphaeta}$	Γ ₁ ^{#3} _{αβ}	Γ ₁ -1 _α	Γ ₁ - α	Γ ₁ ⁻³ _α	$\Gamma_{1}^{\#4}$	Γ ₁ - _α	Γ ₁ -α	$h_1^{\#1}\alpha$
$\Gamma_{1}^{#1} + \alpha$	$\frac{1}{4} \left(-a_0 - 6 a_1 + 5 a_2 \right)$	$-\frac{a_0 + 2a_1 - 3a_2}{2\sqrt{2}}$	$\frac{1}{4} \left(-2 a_1 - a_2 - a_9 \right)$	0	0	0	0	0	0	0
$\Gamma_{1+}^{#2} + \alpha$	$-\frac{a_0 + 2a_1 - 3a_2}{2\sqrt{2}}$	$\frac{1}{2} \left(-2 a_1 + a_2 \right)$	$\frac{2 a_1 + a_2 + a_9}{2 \sqrt{2}}$	0	0	0	0	0	0	0
$\Gamma_{1}^{#3} \uparrow^{\alpha}$	$\frac{1}{4} \left(-2 a_1 - a_2 - a_9 \right)$	$\frac{2a_1+a_2+a_9}{2\sqrt{2}}$	$\frac{3}{4} (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)$	0	0	0	0	0	0	0
Γ ₁ -1 †	α 0	0	0	$\frac{1}{4} \left(-a_0 - 2 a_1 - a_2 - 2 a_3 \right)$	$\frac{a_0 + a_3}{2\sqrt{2}}$	0	0	$-\frac{2a_1+a_2+a_9}{2\sqrt{6}}$	$\frac{2a_1 + a_2 + a_9}{4\sqrt{3}}$	0
Γ ₁ - †	0	0	0	$\frac{a_0 + a_3}{2\sqrt{2}}$	$\frac{1}{4} \left(-2 a_1 - a_2 - a_3 \right)$	0	0	$-\frac{2a_1+a_2+a_9}{2\sqrt{3}}$	$\frac{2 a_1 + a_2 + a_9}{2 \sqrt{6}}$	0
Γ ₁ -3 †	0	0	0	0	0	$-\frac{5}{2}(a_0+4a_6-4a_7)$	$\frac{1}{2} \sqrt{5} (a_0 + 4 a_6 - 4 a_7)$	0	0	0
Γ ₁ -4 †	0	0	0	0	0	$\frac{1}{2} \sqrt{5} (a_0 + 4 a_6 - 4 a_7)$	$-\frac{a_0}{2}$ - 2 a_6 + 2 a_7	0	0	0
Γ ₁ ^{#5} †	α 0	0	0	$-\frac{2a_1+a_2+a_9}{2\sqrt{6}}$	$-\frac{2a_1+a_2+a_9}{2\sqrt{3}}$	0	0	$\frac{1}{2} (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)$	$\frac{-a_0 + 4a_1 + 2a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9}{2\sqrt{2}}$	0
Γ ₁ -6 †	α 0	0	0	$\frac{2a_1 + a_2 + a_9}{4\sqrt{3}}$	$\frac{2a_1 + a_2 + a_9}{2\sqrt{6}}$	0	0	$\frac{-a_0 + 4a_1 + 2a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9}{2\sqrt{2}}$	$\frac{1}{4} (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)$	0
$h_1^{\#1}$ †	0	0	0	0	0	0	0	0	0	0

Quadratic (free) Lagrangian density
$\frac{2}{3} a_1 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} + \frac{1}{3} a_2 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} + \frac{1}{2} a_3 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} - 2 a_6 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} +$
$\frac{1}{3} a_9 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} - \frac{1}{4} a_0 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{3}{2} a_1 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{4} a_2 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{4} a_3 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{4} a_4 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{4} \Gamma_{\alpha\gamma} \Gamma^{\alpha\gamma} - \frac{1}{4} \Gamma$
$\frac{3}{4} a_3 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} + 2 a_6 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} + a_7 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_9 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} -$
$\frac{1}{4} a_0 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_1 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{3}{4} a_2 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{3}{4} a_3 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} +$
$2 a_6 \Gamma_{\alpha \chi \beta} \Gamma^{\alpha \beta \chi} + a_7 \Gamma_{\alpha \chi \beta} \Gamma^{\alpha \beta \chi} - \frac{1}{2} a_9 \Gamma_{\alpha \chi \beta} \Gamma^{\alpha \beta \chi} - \frac{1}{2} a_0 \Gamma^{\alpha \beta \chi} \Gamma_{\beta \alpha \chi} +$
$\frac{1}{4} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - \frac{3}{8} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} + \frac{3}{8} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - 4 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} +$
$\frac{5}{2} a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - \frac{3}{2} a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{1}{2} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{5}{4} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$
$\frac{3}{4} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} - 8 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 5 a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{1}{2} a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$
$\frac{1}{2} a_0 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - a_1 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_2 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_3 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} +$
$4 a_6 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 2 a_7 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - \frac{1}{2} a_9 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} + \frac{1}{2} a_0 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} -$
$\frac{1}{3} a_1 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{6} a_2 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_3 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 4 a_6 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} -$
$2 a_7 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{6} a_9 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{5}{4} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} +$
$\frac{1}{8} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{3}{8} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} - 4 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{5}{2} a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} +$
$\frac{1}{2} a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{1}{2} a_0 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{3} a_1 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{6} a_2 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} +$
$\frac{1}{2} a_3 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} - a_7 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{6} a_9 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} - \frac{1}{2} a_7 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta\chi} +$
$\frac{1}{3} a_1 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi\beta} + \frac{1}{6} a_2 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi\beta} - \frac{1}{2} a_7 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi\beta} + \frac{1}{6} a_9 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi\beta} +$
$h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \Gamma^{\alpha\beta\chi} \Delta_{\alpha\beta\chi} - \frac{1}{2} a_0 \Gamma^{\alpha\beta\chi} \partial_\beta h_{\alpha\chi} - \frac{1}{4} a_0 \Gamma^{\alpha}_{\ \alpha}{}^\beta \partial_\beta h^\chi_{\ \chi} +$
$\frac{1}{4} a_0 \Gamma^{\alpha\beta}_{\alpha} \partial_{\beta} h^{\chi}_{\chi} - \frac{1}{4} a_0 h^{\chi}_{\chi} \partial_{\beta} \Gamma^{\alpha\beta}_{\alpha} + \frac{1}{4} a_0 h^{\chi}_{\chi} \partial_{\beta} \Gamma^{\alpha\beta}_{\alpha} - \frac{1}{2} a_0 h_{\alpha\chi} \partial_{\beta} \Gamma^{\alpha\beta\chi} +$
$\frac{1}{4} a_0 h^{\alpha\beta} \partial_{\beta} \partial_{\alpha} h^{\chi}_{\chi} - \frac{1}{8} a_0 \partial_{\beta} h^{\chi}_{\chi} \partial^{\beta} h^{\alpha}_{\alpha} + \frac{1}{2} a_0 \Gamma^{\alpha}_{\alpha}{}^{\beta} \partial_{\chi} h^{\chi}_{\beta} + \frac{1}{4} a_0 \partial^{\beta} h^{\alpha}_{\alpha} \partial_{\chi} h^{\chi}_{\beta} -$
$\frac{1}{2} a_0 h^{\alpha\beta} \partial_{\chi} \partial_{\beta} h_{\alpha}^{\chi} + \frac{1}{4} a_0 h^{\alpha}_{\alpha} \partial_{\chi} \partial_{\beta} h^{\beta\chi} + \frac{1}{4} a_0 h^{\alpha\beta} \partial_{\chi} \partial^{\chi} h_{\alpha\beta} - \frac{1}{4} a_0 h^{\alpha}_{\alpha} \partial_{\chi} \partial^{\chi} h^{\beta}_{\beta} -$
$\frac{1}{4} a_0 \partial_{\beta} h_{\alpha \chi} \partial^{\chi} h^{\alpha \beta} + \frac{1}{8} a_0 \partial_{\chi} h_{\alpha \beta} \partial^{\chi} h^{\alpha \beta} + \frac{1}{2} a_0 h_{\beta \chi} \partial^{\chi} \Gamma^{\alpha \beta}_{\alpha} + 2 a_1 \partial_{\alpha} \Gamma_{\beta \chi \mu} \partial^{\mu} \Gamma^{\alpha \beta \chi} -$
$2 a_1 \partial_{\alpha} \Gamma_{\beta\mu\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\alpha} \Gamma_{\chi\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 2 a_1 \partial_{\alpha} \Gamma_{\chi\mu\beta} \partial^{\mu} \Gamma^{\alpha\beta\chi} +$
$a_1 \partial_\alpha \Gamma_{\mu\beta\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\beta} \partial^\mu \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_\beta \Gamma_{\alpha\chi\mu} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\beta \Gamma_{\alpha\mu\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\beta} \partial^\mu \Gamma^{\alpha\gamma} - a_1 \partial_\alpha \Gamma_{\mu\chi\gamma} \partial^\mu \Gamma^{\alpha\gamma} - a_1 \partial_\alpha \Gamma_{\mu\chi\gamma} \partial^\mu \Gamma^{\alpha\gamma} - a_1 \partial_\alpha \Gamma_{\mu\chi\gamma} \partial^\mu \Gamma^{\alpha\gamma} - a_1 \partial_\alpha \Gamma^{\alpha\gamma$
$a_1 \partial_{\beta} \Gamma_{\chi\mu\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} + a_1 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_1 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 2 a_1 \partial_{\chi} \Gamma_{\beta\mu\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_1 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + a_2 a_3 \partial_{\chi} \Gamma_{\beta\mu\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_3 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + a_3 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_3 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + a_4 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_5 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - a_5 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\gamma} - a_5 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\gamma} - a_5 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\gamma} - a_5 \partial_{\chi} $
$a_1 \partial_\mu \Gamma_{\alpha\beta\chi} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\mu \Gamma_{\alpha\chi\beta} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\mu \Gamma_{\beta\alpha\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_\mu \Gamma_{\beta\chi\alpha} \partial^\mu \Gamma^{\alpha\beta\chi} +$
$a_1 \partial_\mu \Gamma_{\chi\beta\alpha} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\chi \partial_\beta h_{\alpha\mu} \partial^\mu \partial^\chi h^{\alpha\beta} - a_1 \partial_\mu \partial_\beta h_{\alpha\chi} \partial^\mu \partial^\chi h^{\alpha\beta}$

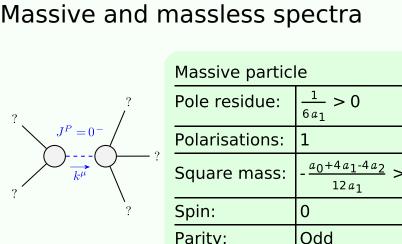
$\Delta_{0^{-}}^{#1}$ †	$\mathcal{T}_{0^{+}}^{#2}$ †	$\mathcal{T}_{0^{+}}^{#1}$ †	$\Delta_{0^{+}}^{#4}$ †	$\Delta_{0}^{#3}$ †	$\Delta_{0}^{#2}$ †	$\Delta_{0}^{#1}$ †	
0	0	0	0	0	0	$-\frac{4}{2a_0+2a_1+a_2+3a_3}$	$\Delta_0^{\#1}$
0	0	0	0	$\frac{1}{6 a_0 + 24 a_6 - 24 a_7}$	$\frac{1}{-6(a_0+4a_6)+24a_7}$	0	$\Delta_0^{#2}$
0	0	0	0	$\frac{1}{-6(a_0+4a_6)+24a_7}$	$\frac{1}{6(a_0+4a_6-4a_7)}$	0	$\Delta_{0}^{#3}$
0	0	0	0	0	0	0	$\Delta_0^{\#4}$
0	0	$\frac{4}{a_0 k^2}$	0	0	0	0	$\Delta_{0^{+}}^{#4} \mathcal{T}_{0^{+}}^{#1} \mathcal{T}_{0^{+}}^{#2}$
0	0	0	0	0	0	0	$\mathcal{T}_{0}^{#2}$
$-\frac{2}{a_0+4(a_1-a_2+3a_1k^2)}$	0	0	0	0	0	0	$\Delta_{0}^{\#1}$

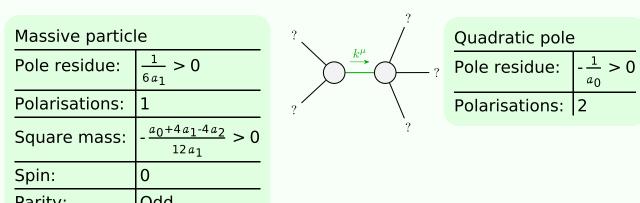
		Ī					F
$-\frac{a_0}{2}$ - 2 a_1 + 2 a_2 - 6 $a_1 k^2$	0	0	0	0	0	0	Γ ₀ -1 +
0	0	0	0	0	0	0	$h_{0+}^{#2} +$
0	0	$\frac{a_0 k^2}{4}$	0	0	0	0	η ₀ ^{#1} †
0	0	0	0	0	0	0	Γ ₀ ^{#4} †
0	0	0	0	$\frac{3}{2}(a_0 + 4a_6 - 4a_7) \left -\frac{3}{2}(a_0 + 4a_6 - 4a_7) \right 0$	$\frac{3}{2}(a_0+4a_6-4a_7)$	0	Γ ₀ ^{#3} †
0	0	0	0	$-\frac{3}{2}(a_0+4a_6-4a_7)\bigg \frac{3}{2}(a_0+4a_6-4a_7)\bigg $	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	Γ ₀ ^{#2} †
0	0	0	0	0	0	$\frac{1}{4} \left(-2a_0 - 2a_1 - a_2 - 3a_3 \right)$	Γ ₀ ^{#1} †
Γ ₀ -1	$h_{0}^{#2}$	$h_{0+}^{#1}$	Γ ₀ #4	Γ ₀ +3	Γ ₀ +2	Γ ₀ ^{#1}	

		$\Delta^{\#1}_{2^+ lphaeta}$	$\Delta^{\#2}_{2^+lphaeta}$	$\Delta^{\#3}_{2}{}^{+}{}_{lphaeta}$	$\mathcal{T}^{\sharp 1}_{2^+ \alpha \beta}$	$\Delta^{\#1}_{2^{-1}lphaeta\chi}$	$\Delta^{\#2}_{2^-lphaeta\chi}$
$\Delta_2^{\#1}$	† ^{αβ}	$\frac{4 \left(a_{0} - 4 a_{1} - 2 a_{2} - 3 a_{3} + 16 a_{6} - 4 a_{7} - 2 a_{9}\right)}{{a_{0}}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)}$	0	$\frac{4 \left(2 a_{1} + a_{2} + a_{9}\right)}{\sqrt{3} \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}$	0	0	0
$\Delta_2^{\#2}$	$^{2} + ^{\alpha\beta}$	0	$\frac{1}{-3(a_0+4a_6)+12a_7}$	0	0	0	0
$\Delta_{2}^{#3}$	$\frac{1}{3} + \frac{\alpha \beta}{3}$	$\frac{4 \left(2 a_{1} + a_{2} + a_{9}\right)}{\sqrt{3} \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}{\left(3 \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}\right)}$	0	$\frac{4 \left(a_{0} - 2 a_{1} - a_{2}\right)}{3 \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}$	0	0	0
${\mathcal T}_2^{\sharp 1}$	$+^{\alpha\beta}$	0	0	0	$-\frac{8}{a_0 k^2}$	0	0
$\Delta_2^{\#1}$	$\dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{4(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)}{{a_0}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	$\frac{4 \left(2 a_{1} + a_{2} + a_{9}\right)}{\sqrt{3} \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}$
$\Delta_2^{\#2}$	$\dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{4(a_0-2a_1-a_2)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$

	Γ ₂ + αβ	$\Gamma^{\#2}_{2^+lphaeta}$	Γ ₂ + _{αβ}	$h_{2}^{\#1}{}_{\alpha\beta}$	Γ ^{#1} ₂ - αβχ	Γ ^{#2} ₂ αβχ
$\Gamma_{2}^{\#1} \dagger^{\alpha\beta}$	$\frac{1}{4}(a_0-2a_1-a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	0	0
$\Gamma_{2}^{\#2} + \alpha \beta$	0	$-3(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{2}^{#3} + \alpha \beta$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	$\frac{3}{4}$ (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)	0	0	0
$h_{2}^{\#1} \dagger^{\alpha\beta}$	0	0	0	$-\frac{a_0 k^2}{8}$	0	0
$\Gamma_2^{#1} \dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{1}{4} (a_0 - 2 a_1 - a_2)$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$
$\Gamma_2^{\#2} \dagger^{\alpha\beta\chi}$	0	0	0	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	$\frac{3}{4} (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9)$

Source constraints	s/gauge generators
SO(3) irreps	Multiplicities
$\mathcal{T}_{0^{+}}^{\#2} == 0$	1
$\Delta_0^{\#4} == 0$	1
$\Delta_{0^{+}}^{\#3} + 3 \Delta_{0^{+}}^{\#2} == 0$	1
$\mathcal{T}_{1}^{\#1\alpha} == 0$	3
$\Delta_{1}^{#6\alpha} + \Delta_{1}^{#5\alpha} == 0$	3
$\Delta_{1}^{\#4\alpha} + \Delta_{1}^{\#3\alpha} == 0$	3
Total constraints:	12





Unitarity conditions

 $a_0 < 0 \&\& a_2 > \frac{1}{4} (a_0 + 4 a_1) \&\& a_1 > 0$