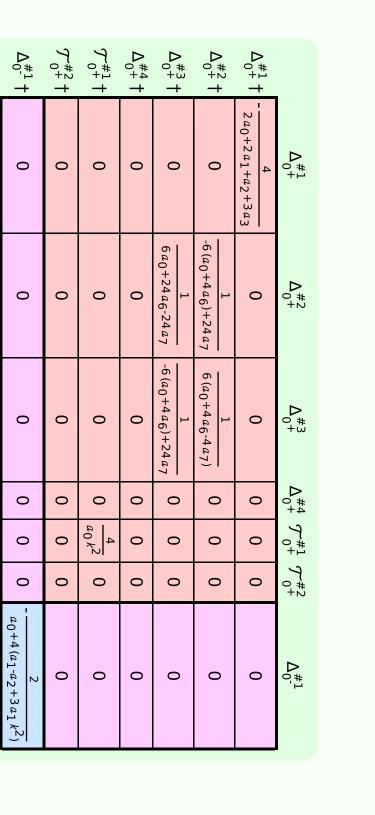
	$\Delta_{1}^{\#1}{}_{lphaeta}$	$\Delta_{1}^{\#2}_{+ \ lphaeta}$	$\Delta_{1}^{\#3}{}_{lphaeta}$	$\Delta_{1^{-}\alpha}^{\sharp 1}$	$\Delta_{1^{-}\alpha}^{\#2}$	$\Delta_{1}^{#3}{}_{\alpha}$	$\Delta_{1-lpha}^{\#4}$	$\Delta_{1^{-}\alpha}^{\#5}$	$\Delta_{1^{-}\alpha}^{\#6}$
$\Delta_{1}^{\#1}\dagger^{lphaeta}$	$(a_0^2 + (2a_1 + a_2) (2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0 (6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	$ \frac{1}{a_0 + 4a_1 - 4a_2} + (-2a_0 + 8a_1 + 4a_2 + 6a_3 - 32a_6 + 8a_7 + 4a_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)))} $	$\frac{(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0	0	0	0
$\Delta_{1}^{\#2}\dagger^{lphaeta}$	$\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)\right)$ $(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-$ $a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))$	$-\frac{2}{3(a_0+4a_1-4a_2)} + (8(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9))/$ $(3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-$ $a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))$	$-((4\sqrt{2}(2a_1 + a_2 + a_9)))/$ $(3(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 -$ $a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))))$	0	0	0	0	0	0
$\Delta_{1}^{\#3}\dagger^{lphaeta}$	$\frac{4(2a_1+a_2+a_9)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-((4\sqrt{2}(2a_1+a_2+a_9)))/$ $(3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-$ $a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))))$	$\frac{4(a_0-2a_1-a_2)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0	0	0	0
$\Delta_1^{\#1} \dagger^\alpha$	0	0	0	$\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) $ $(a_0^2 + (2a_1 + a_2) (2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - $ $a_9^2 - a_0 (6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	$(4\sqrt{2}(3a_0^2 - 4a_1^2 - a_2^2 - 3a_3(3a_3 + 4(-4a_6 + a_7)) - 6a_3a_9 - a_9^2 - 2a_2(3a_3 + a_9) - 4a_1(a_2 + 3a_3 + a_9) - 6a_0(2a_1 + a_2 + a_3 - 8a_6 + 2a_7 + a_9)))/$ $(3(2a_0 + 2a_1 + a_2 + 3a_3)$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	0	0	$\frac{4\sqrt{\frac{2}{3}}\left(2a_{1}+a_{2}+a_{9}\right)}{3\left(a_{0}^{2}+\left(2a_{1}+a_{2}\right)\left(2a_{1}+a_{2}+3a_{3}-16a_{6}+4a_{7}\right)-a_{9}^{2}-a_{0}\left(6a_{1}+3a_{2}+3a_{3}-16a_{6}+4a_{7}+2a_{9}\right)\right)}$	$-((4(2a_1+a_2+a_9)))/$ $(3\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-$ $a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))))$
$\Delta_1^{\#2} \dagger^{lpha}$	0	0	0	$(4\sqrt{2}(3a_0^2 - 4a_1^2 - a_2^2 - 3a_3(3a_3 + 4(-4a_6 + a_7)) - 6a_3a_9 - a_9^2 - 2a_2(3a_3 + a_9) - 4a_1(a_2 + 3a_3 + a_9) - 6a_0(2a_1 + a_2 + a_3 - 8a_6 + 2a_7 + a_9)))/$ $(3(2a_0 + 2a_1 + a_2 + 3a_3)$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	$-\frac{4}{3(2a_0+2a_1+a_2+3a_3)} + (8(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9))a_0$ $(3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))$	0	0	$(8(2a_1 + a_2 + a_9))/$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	$-((4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9))/$ $(3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-$ $a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))))$
$\Delta_1^{#3} \dagger^{\alpha}$	0	0	0	0	0	$-\frac{5}{18(a_0+4a_6-4a_7)}$	$\frac{\sqrt{5}}{18(a_0 + 4a_6 - 4a_7)}$	0	0
$\Delta_1^{\#4} \uparrow^{lpha}$	0	0	0	0	0	√5	1 -18 (a ₀ +4a ₆)+72 a ₇	0	0
$\Delta_1^{\#5} \dagger^{lpha}$	0	0	0	$\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$(8(2a_1 + a_2 + a_9))/$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$	0		$\frac{8 \left(a_{0}-2 a_{1}-a_{2}\right)}{9 \left(a_{0}^{2}+\left(2 a_{1}+a_{2}\right) \left(2 a_{1}+a_{2}+3 a_{3}-16 a_{6}+4 a_{7}\right)-a_{9}^{2}-a_{0} \left(6 a_{1}+3 a_{2}+3 a_{3}-16 a_{6}+4 a_{7}+2 a_{9}\right)\right)}$	$\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$
$\Delta_1^{\#6}\dagger^lpha$	0	0	0	$-((4(2a_1 + a_2 + a_9))/$ $(3\sqrt{3}(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) -$ $a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9))))$	$-((4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9))/$ $(3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-$ $a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))))$	0	0	$\frac{4\sqrt{2}\left(-a_{0}+2a_{1}+a_{2}\right)}{9\left(a_{0}^{2}+\left(2a_{1}+a_{2}\right)\left(2a_{1}+a_{2}+3a_{3}-16a_{6}+4a_{7}\right)-a_{9}^{2}-a_{0}\left(6a_{1}+3a_{2}+3a_{3}-16a_{6}+4a_{7}+2a_{9}\right)\right)}$	$\frac{4(a_0-2a_1-a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$
${\mathcal T}_1^{\#1} {\dagger}^{lpha}$	0	0	0	0	0	0	0	0	0

	$\Gamma_{1}^{\#1}{}_{lphaeta}$	$\Gamma^{\#2}_{1}{}^{+}\alpha \beta$	$\Gamma_{1}^{\#3}_{\alpha\beta}$	$\Gamma_{1}^{\#1}{}_{\alpha}$	Γ ₁ ^{#2} α	Γ ₁ ^{*3} α	$\Gamma_{1}^{\#4}$	Γ ₁ ⁻ α	Γ ₁ ^{#6} α	$h_1^{\#1}\alpha$
$\Gamma_{1}^{#1} \dagger^{\alpha\beta}$	$\frac{1}{4} \left(-a_0 - 6 a_1 + 5 a_2 \right)$	$-\frac{a_0+2a_1-3a_2}{2\sqrt{2}}$	$\frac{1}{4} \left(-2 a_1 - a_2 - a_9 \right)$	0	0	0	0	0	0	0
$\Gamma_{1}^{#2} \dagger^{\alpha\beta}$	$-\frac{a_0 + 2a_1 - 3a_2}{2\sqrt{2}}$	$\frac{1}{2}\left(-2a_1+a_2\right)$	$\frac{2 a_1 + a_2 + a_9}{2 \sqrt{2}}$	0	0	0	0	0	0	0
$\Gamma_1^{#3} \dagger^{\alpha\beta}$	$\frac{1}{4} \left(-2 a_1 - a_2 - a_9 \right)$	$\frac{2a_1+a_2+a_9}{2\sqrt{2}}$	$\frac{3}{4} (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9)$	0	0	0	0	0	0	0
$\Gamma_1^{\#1} \uparrow^{\alpha}$	0	0	0	$\frac{1}{4} (-a_0 - 2 a_1 - a_2 - 2 a_3)$	$\frac{a_0 + a_3}{2\sqrt{2}}$	0	0	$-\frac{2a_1+a_2+a_9}{2\sqrt{6}}$	$\frac{2a_1 + a_2 + a_9}{4\sqrt{3}}$	0
$\Gamma_1^{\#2} \uparrow^{\alpha}$	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	$-\frac{2a_1+a_2+a_9}{2\sqrt{3}}$	$\frac{2a_1 + a_2 + a_9}{2\sqrt{6}}$	0
$\Gamma_1^{#3} \dagger^{\alpha}$	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
$\Gamma_1^{\#4} \uparrow^{\alpha}$	0	0	0	0	0	$\frac{1}{2}\sqrt{5}(a_0+4a_6-4a_7)$	$-\frac{a_0}{2}$ - 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	$\frac{2a_1 + a_2 + a_9}{4\sqrt{3}}$	$\frac{2 a_1 + a_2 + a_9}{2 \sqrt{6}}$	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
$h_{1}^{\#1} + \alpha$	0	0	0	0	0	0	0	0	0	0

agrangian density
$\frac{2}{3} a_1 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} + \frac{1}{3} a_2 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} + \frac{1}{2} a_3 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} - 2 a_6 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} +$
$\frac{1}{3} a_9 \Gamma_{\alpha \chi}^{\chi} \Gamma_{\beta}^{\alpha\beta} - \frac{1}{4} a_0 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{3}{2} a_1 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{4} a_2 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} -$
$\frac{3}{4} a_3 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} + 2 a_6 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} + a_7 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_9 \Gamma_{\alpha\beta\chi} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_{10} \Gamma_{\alpha\gamma} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_{10} \Gamma_{\alpha\gamma} \Gamma^{\alpha\gamma} - \frac{1}{2} a_{10} \Gamma^{\alpha\gamma} - \frac{1}{2} \alpha^{\alpha\gamma} - \frac{1}{2} \alpha^{\alpha\gamma} - \frac{1}{2} \alpha^{\alpha\gamma} - \frac{1}{2} \alpha^{\alpha\gamma} - \frac{1}{2} \alpha^{\alpha\gamma$
$\frac{1}{4} a_0 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_1 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{3}{4} a_2 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{3}{4} a_3 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} +$
$2 a_6 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} + a_7 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_9 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - \frac{1}{2} a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} +$
$\frac{1}{4} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - \frac{3}{8} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} + \frac{3}{8} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - 4 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} +$
$\frac{5}{2} a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - \frac{3}{2} a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{1}{2} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{5}{4} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$
$\frac{3}{4} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} - 8 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 5 a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + \frac{1}{2} a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$
$\frac{1}{2} a_0 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - a_1 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - \frac{1}{2} a_2 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - \frac{1}{2} a_3 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} +$
$4a_{6} \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 2a_{7} \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - \frac{1}{2}a_{9} \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} + \frac{1}{2}a_{0} \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} -$
$\frac{1}{3} a_1 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{6} a_2 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_3 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 4 a_6 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} -$
$2 a_7 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{6} a_9 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - \frac{1}{2} a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{5}{4} a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} +$
$\frac{1}{8} a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{3}{8} a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} - 4 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{5}{2} a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} +$
$\frac{1}{2} a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + \frac{1}{2} a_0 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{3} a_1 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{6} a_2 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma^{\chi}_{\beta\chi} +$
$\frac{1}{2} a_3 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\beta\chi} - a_7 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\beta\chi} + \frac{1}{6} a_9 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\beta\chi} - \frac{1}{2} a_7 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta\chi} +$
$\frac{1}{3} a_1 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} + \frac{1}{6} a_2 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} - \frac{1}{2} a_7 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} + \frac{1}{6} a_9 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} +$
$h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \Gamma^{\alpha\beta\chi} \Delta_{\alpha\beta\chi} - \frac{1}{2} a_0 \Gamma^{\alpha\beta\chi} \partial_{\beta} h_{\alpha\chi} - \frac{1}{4} a_0 \Gamma^{\alpha\beta}_{\alpha} \partial_{\beta} h_{\chi}^{\chi} +$
$\frac{1}{4} a_0 \Gamma^{\alpha\beta}_{\alpha} \partial_{\beta} h^{\chi}_{\chi} - \frac{1}{4} a_0 h^{\chi}_{\chi} \partial_{\beta} \Gamma^{\alpha\beta}_{\alpha} + \frac{1}{4} a_0 h^{\chi}_{\chi} \partial_{\beta} \Gamma^{\alpha\beta}_{\alpha} - \frac{1}{2} a_0 h_{\alpha\chi} \partial_{\beta} \Gamma^{\alpha\beta\chi} +$
$\frac{1}{4} a_0 h^{\alpha\beta} \partial_{\beta} \partial_{\alpha} h^{\chi}_{\chi} - \frac{1}{8} a_0 \partial_{\beta} h^{\chi}_{\chi} \partial^{\beta} h^{\alpha}_{\alpha} + \frac{1}{2} a_0 \Gamma^{\alpha}_{\alpha}{}^{\beta} \partial_{\chi} h_{\beta}{}^{\chi} + \frac{1}{4} a_0 \partial^{\beta} h^{\alpha}_{\alpha} \partial_{\chi} h_{\beta}{}^{\chi} -$
$\frac{1}{2} a_0 h^{\alpha\beta} \partial_{\chi} \partial_{\beta} h_{\alpha}^{\chi} + \frac{1}{4} a_0 h^{\alpha}_{\alpha} \partial_{\chi} \partial_{\beta} h^{\beta\chi} + \frac{1}{4} a_0 h^{\alpha\beta} \partial_{\chi} \partial^{\chi} h_{\alpha\beta} - \frac{1}{4} a_0 h^{\alpha}_{\alpha} \partial_{\chi} \partial^{\chi} h^{\beta}_{\beta} -$
$\frac{1}{4} a_0 \partial_{\beta} h_{\alpha \chi} \partial^{\chi} h^{\alpha \beta} + \frac{1}{8} a_0 \partial_{\chi} h_{\alpha \beta} \partial^{\chi} h^{\alpha \beta} + \frac{1}{2} a_0 h_{\beta \chi} \partial^{\chi} \Gamma^{\alpha \beta}_{\alpha} + 2 a_1 \partial_{\alpha} \Gamma_{\beta \chi \mu} \partial^{\mu} \Gamma^{\alpha \beta \chi} -$
$2 a_1 \partial_{\alpha} \Gamma_{\beta\mu\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\alpha} \Gamma_{\chi\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 2 a_1 \partial_{\alpha} \Gamma_{\chi\mu\beta} \partial^{\mu} \Gamma^{\alpha\beta\chi} +$
$a_1 \partial_\alpha \Gamma_{\mu\beta\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\beta} \partial^\mu \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_\beta \Gamma_{\alpha\chi\mu} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\beta \Gamma_{\alpha\mu\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\beta} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\gamma} \partial^\mu \Gamma^{\alpha\beta\chi} - a_1 \partial_\alpha \Gamma_{\mu\chi\gamma} \partial^\mu \Gamma^{\alpha\gamma} - a_1 \partial_\alpha \Gamma^{\alpha\gamma} - a_1$
$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\alpha\mu} \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\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\mu} - a_5 \partial_{\chi} $
$a_1 \partial_\mu \Gamma_{\alpha\beta\chi} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\mu \Gamma_{\alpha\chi\beta} \partial^\mu \Gamma^{\alpha\beta\chi} + a_1 \partial_\mu \Gamma_{\beta\alpha\chi} \partial^\mu \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_\mu \Gamma_{\beta\chi\alpha} \partial^\mu \Gamma^{\alpha\beta\chi} +$
$a_1 \partial_{\mu} \Gamma_{\chi\beta\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} + a_1 \partial_{\chi} \partial_{\beta} h_{\alpha\mu} \partial^{\mu} \partial^{\chi} h^{\alpha\beta} - a_1 \partial_{\mu} \partial_{\beta} h_{\alpha\chi} \partial^{\mu} \partial^{\chi} h^{\alpha\beta}$



<u> </u>	+		+	\rightarrow	\rightarrow	_+_	
0	0	0	0	0	0	$\frac{1}{4} \left(-2 a_0 - 2 a_1 - a_2 - 3 a_3 \right)$	Γ ₀ +-
0	0	0	0	$\frac{3}{2}(a_0+4a_6-4a_7)$	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	Γ ₀ +
0	0	0	0	$\frac{3}{2}(a_0 + 4a_6 - 4a_7) \left -\frac{3}{2}(a_0 + 4a_6 - 4a_7) \right $	$-\frac{3}{2}(a_0 + 4a_6 - 4a_7) \left \frac{3}{2}(a_0 + 4a_6 - 4a_7) \right 0$	0	Γ ₀ +0
0	0	0	0	0	0	0	Γ ₀₊ *
0	0	$\frac{a_0 k^2}{4}$	0	0	0	0	$\Gamma_{0+}^{#4} h_{0+}^{#1}$
0	0	0	0	0	0	0	$h_{0+}^{\#2}$
$-\frac{a_0}{2}$ - 2 a_1 + 2 a_2 - 6 a_1 k^2	0	0	0	0	0	0	Γ ₀ -1
Total	Λ#4α	$\frac{1}{\Delta_{1-}^{\#6}\alpha}$	$rac{\Gamma_{0^{+}}}{\pi^{*1}\alpha}$	Δ ₀ + ==	7 #4 > #4	SO(3)	Sourc

\(\begin{aligned}
\Gamma_{0+1}^{#1} \\
\Gamma_{0+2}^{#3} \\
\Gamma_{0+1}^{#3} \\
\Delta_{0+2}^{#2} \\
\Gamma_{0+2}^{#1} \\
\Gamma_{0-1}^{#1} \\
\Tag{1.5}
\end{aligned}

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

		2 αρ	2 αρ	ζ αρ	2 αρ	2 αρχ	2 αρχ
Δ	$\Lambda_{2}^{\#1} + \alpha^{\beta}$	$\frac{4 \left(a_{0}-4 a_{1}-2 a_{2}-3 a_{3}+16 a_{6}-4 a_{7}-2 a_{9}\right)}{{a_{0}}^{2}+\left(2 a_{1}+a_{2}\right) \left(2 a_{1}+a_{2}+3 a_{3}-16 a_{6}+4 a_{7}\right)-a_{9}^{2}-a_{0} \left(6 a_{1}+3 a_{2}+3 a_{3}-16 a_{6}+4 a_{7}+2 a_{9}\right)}$	0	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	0	0	0
Δ	$\Lambda_{2}^{\#2} + \alpha^{\beta}$	0	$\frac{1}{-3(a_0+4a_6)+12a_7}$	0	0	0	0
Δ	$\Lambda_{2}^{#3} + \alpha^{\beta}$	$\frac{4 \left(2 a_{1} + a_{2} + a_{9}\right)}{\sqrt{3} \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}$	0	$\frac{4 \left(a_{0} - 2 a_{1} - a_{2}\right)}{3 \left(a_{0}^{2} + \left(2 a_{1} + a_{2}\right) \left(2 a_{1} + a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7}\right) - a_{9}^{2} - a_{0} \left(6 a_{1} + 3 a_{2} + 3 a_{3} - 16 a_{6} + 4 a_{7} + 2 a_{9}\right)\right)}$	0	0	0
\mathcal{T}	$^{+1}_{2}$ $^{+}$	0	0	0	$-\frac{8}{a_0 k^2}$	0	0
Δ	$\frac{\#1}{2}$ † $\alpha\beta\chi$	0	0	0	0	$\frac{4 (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)}{{a_0}^2 + (2 a_1 + a_2) (2 a_1 + a_2 + 3 a_3 - 16 a_6 + 4 a_7) - a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9)}$	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$
Δ	$\frac{\#2}{2}$ † $\alpha\beta\chi$	0	0	0	0	4(2a ₁ +a ₂ +a ₉)	$\frac{4(a_0-2a_1-a_2)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$

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

<u> </u>	$\Delta_{1^{-}}^{\#4\alpha} + \Delta_{1^{-}}^{\#3\alpha} == 0$	$\Delta_{1^{-}}^{\#6\alpha} + \Delta_{1^{-}}^{\#5\alpha} == 0$	$_{1}^{-\#1\alpha} == 0$	$^{#3}_{0^+} + 3 \Delta^{#2}_{0^+} == 0$	*4 *0+ == 0	~#2 0+ == 0	O(3) irreps	ource constraints	
ן נ	3	ω	ω	1	1	1	#	S	

	Massive partic	le
?	Pole residue:	$\frac{1}{6a_1} > 0$
$J^P = 0^-$	Polarisations:	1
k^{μ} ?	Square mass:	$-\frac{a_0+4a_1-4a_2}{12a_1}$
?	Spin:	0

ticle		? /	Quadratic pole	
:	$\left \frac{1}{6a_1}>0\right $?	Pole residue: $-\frac{1}{a_0} > 0$	
5:	1	?	Polarisations: 2	
s:	$\left -\frac{a_0 + 4a_1 - 4a_2}{12a_1} > 0 \right $?		
	0			