$\Delta_{1^{+}\alpha\beta}^{\#1}$

 $\frac{4}{3} \left(-\frac{1}{a_0 + 4a_1 - 4a_2} + (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9) \right)$

 $\Gamma_{1}^{\#3} + \alpha \beta = \frac{1}{4} (-2 a_1 - a_2 - a_9) = \frac{2 a_1 + a_2 + a_9}{2 \sqrt{2}} = \frac{3}{4} (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)$

 $\Delta_1^{#2}$ †

Massive and massless spectra											
	Massive partic	le	? /	Quadratic pole	9						
? /	Pole residue:	$\left \frac{1}{6a_1} > 0\right $?	Pole residue:	$-\frac{1}{a_0}$						
$J^P = 0^-$	Polarisations:	1	?	Polarisations:	2						
$\frac{1}{k^{\mu}}$	Square mass:	$-\frac{a_0 + 4a_1 - 4a_2}{12a_1} > 0$?								
?	Spin:	0									
	Parity:	Odd									

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

 $\Delta_{1}^{\#2}{}_{lphaeta}$

 $\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)\right)$

 $\frac{a_0 + a_3}{2\sqrt{2}}$

 $-\frac{2a_1+a_2+a_9}{2\sqrt{6}}$

 $\frac{2a_1 + a_2 + a_9}{4\sqrt{3}}$

 $\frac{1}{4}$ (-2 a_1 - a_2 - a_3)

 $-\frac{2a_1+a_2+a_9}{2\sqrt{3}}$

 $\frac{2a_1 + a_2 + a_9}{2\sqrt{6}}$

 $-\frac{5}{2}(a_0+4a_6-4a_7)$ $\left|\frac{1}{2}\sqrt{5}(a_0+4a_6-4a_7)\right|$

 $-\frac{a_0}{2}$ - 2 a_6 + 2 a_7

 $\frac{1}{5} \sqrt{5} (a_0 + 4 a_6 - 4 a_7)$

 $\Delta_{1}^{\#3}{}_{lphaeta}$

 $\frac{4 \left(2 \, a_{1} + a_{2} + a_{9}\right)}{3 \left(a_{0}^{2} + \left(2 \, a_{1} + a_{2}\right) \left(2 \, a_{1} + a_{2} + 3 \, a_{3} - 16 \, a_{6} + 4 \, a_{7}\right) - a_{9}^{2} - a_{0} \left(6 \, a_{1} + 3 \, a_{2} + 3 \, a_{3} - 16 \, a_{6} + 4 \, a_{7} + 2 \, a_{9}\right)\right)}$

 $-\frac{2a_1+a_2+a_9}{2\sqrt{3}}$

 $\frac{1}{2} (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_6 - 4 a_7 - 2 a_9)$

 $\frac{-a_0 + 4a_1 + 2a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9}{2\sqrt{2}}$

 $\frac{2a_1 + a_2 + a_9}{2\sqrt{6}}$

 $\frac{-a_0 + 4a_1 + 2a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9}{2\sqrt{2}}$

 $\left| \frac{1}{4} (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9) \right| = 0$

		$\Gamma^{\#1}_{2^+ lphaeta}$	$\Gamma^{\#2}_{2}{}^{+}\alpha\beta$	Γ ₂ + _{αβ}
	$\Gamma_{2}^{#1}$ † lphaeta	$\frac{1}{4} (a_0 - 2 a_1 - a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_3)$
	$\Gamma_{2}^{\#2}$ $\dagger^{lphaeta}$	0	$-3(a_0+4a_6-4a_7)$	0
	$\Gamma_2^{\#3} \dagger^{lphaeta}$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	$\frac{3}{4}$ (a_0 - 4 a_1 - 2 a_2 - 3 a_3 + 16 a_4
	$h_{2+}^{\#1} \dagger^{\alpha\beta}$	0	0	0
	$\Gamma_2^{\#1} \dagger^{lphaeta\chi}$	0	0	0
;+4 <i>a</i> 7+2 <i>a</i> 9))	- #2 ⊥ αβχ	0	0	0

 $\Gamma_{3}^{\#1} \uparrow^{\alpha\beta\chi} \left[-3 \left(a_0 + 4 a_6 - 4 a_7 \right) \right] \Delta_{3}^{\#1} \uparrow^{\alpha\beta\chi} \left[\frac{1}{-3 \left(a_0 + 4 a_6 \right) + 12 a_7} \right]$

$24 a_1 \partial_{\chi} \partial_{\beta} h_{\alpha\mu} \partial^{\mu} \partial^{\chi} h^{\alpha\beta} - 24 a_1 \partial_{\mu} \partial_{\beta} h_{\alpha\chi} \partial^{\mu} \partial^{\chi} h^{\alpha\beta}))[$	[t, x, y, z] dz dy dx dt						
$\Delta_2^{\#2}{}_{lphaeta\chi}$		$\Gamma_{2}^{\#1}{}_{lphaeta}$	$\Gamma^{\#2}_{2^+lphaeta}$	Γ ₂ + αβ	$h_{2}^{\#1}_{lphaeta}$	$\Gamma_{2^{-}lphaeta\chi}^{\#1}$	Γ ₂ -2 _{αβχ}
0	$\Gamma_{2^{+}}^{\#1}\dagger^{lphaeta}$	$\frac{1}{4}(a_0-2a_1-a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	0	0
0	$\Gamma_{2+}^{\#2} \dagger^{lphaeta}$	0	$-3(a_0+4a_6-4a_7)$	0	0	0	0
0	$\Gamma_{2+}^{\#3}\dagger^{lphaeta}$.	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	$\frac{3}{4} (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9)$	0	0	0
	$h_2^{\#1} \dagger^{\alpha\beta}$	0	0	0	$-\frac{a_0 k^2}{8}$	0	0
0 4 (2 a ₁ +a ₂ +a ₉)	$\Gamma_2^{\#1} \dagger^{lphaeta X}$	0	0	0	0	$\frac{1}{4}(a_0 - 2a_1 - a_2)$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$
$+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))$	$\Gamma_2^{\#2} \dagger^{lphaeta X}$	0	0	0	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	$\frac{3}{4}$ (a ₀ - 4 a ₁ - 2 a ₂ - 3 a ₃ + 16 a ₆ - 4 a ₇ - 2 a ₉
$\frac{4(a_0-2a_1-a_2)}{a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	_	Γ# ¹ 3 ⁻ αβχ	$\Delta^{\#1}_{3}{}_{lphaeta\chi}$			7	I ·

$24 a_1 \partial_{\mu} \Gamma_{\beta\alpha\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 48 a_1 \partial_{\mu} \Gamma_{\beta\chi\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 24 a_2$ $24 a_1 \partial_{\chi} \partial_{\beta} h_{\alpha\mu} \partial^{\mu} \partial^{\chi} h^{\alpha\beta} - 24 a_1 \partial_{\mu} \partial_{\beta} h_{\alpha\chi} \partial^{\mu} \partial^{\chi} h^{\alpha\beta}))[a_1 \partial_{\mu} \partial_{\gamma} h_{\alpha\chi} \partial^{\mu} \partial^{\chi} h^{\alpha\beta})][a_2 \partial_{\gamma} h_{\alpha\chi} \partial^{\mu} \partial_{\gamma} h_{\alpha\chi} \partial$,	<u> </u>					
$\Delta_{2}^{\#2}{}_{\alpha\beta\chi}$	_	$\Gamma^{\#1}_{2^+lphaeta}$	$\Gamma^{\#2}_{2}{}^{+}\alpha \beta$	Γ ₂ + αβ	$h_{2}^{\#1}_{lphaeta}$	$\Gamma_{2}^{\#1}_{\alpha\beta\chi}$	$\Gamma_{2}^{\#2}_{~\alpha\beta\chi}$
0	$\Gamma_{2}^{\#1} \dagger^{lphaeta}$	$\frac{1}{4} (a_0 - 2 a_1 - a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	0	0
0	$\Gamma_{2+}^{#2} \dagger^{lphaeta}$	0	$-3(a_0+4a_6-4a_7)$	0	0	0	0
0	$\Gamma_{2+}^{#3} \dagger^{lphaeta}$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	$\frac{3}{4} (a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9)$	0	0	0
0	$h_{2}^{\#1} \dagger^{\alpha\beta}$	0	0	0	$-\frac{a_0 k^2}{8}$	0	0
4 (2 a ₁ +a ₂ +a ₉)	$\Gamma_2^{\#1} \dagger^{lphaeta\chi}$	0	0	0	0	$\frac{1}{4}(a_0-2a_1-a_2)$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$
$+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))$	$\Gamma_2^{\#2} \dagger^{lphaeta\chi}$	0	0	0	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	$\frac{3}{4}(a_0 - 4a_1 - 2a_2 - 3a_3 + 16a_6 - 4a_7 - 2$
$4(a_0-2a_1-a_2)$	L	<i>u</i> 2	""			7	<u> </u>

 $\Delta_{1}^{\#5}{}_{lpha}$

						(3)	
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 ^{#2}
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 ^{#3}
0	0	0	0	0	0	0	Γ ₀ #4
0	0	$\frac{a_0 k^2}{4}$	0	0	0	0	$h_{0+}^{#1} h_{0+}^{#2}$
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	$\Gamma^{\#1}_{0^-}$

Source constraints/gauge generators

SO(3) irreps

 $\Delta_{0^{+}}^{#3} + 3\Delta_{0^{+}}^{#2} == 0$

 $\Delta_{1}^{\#6\alpha} + \Delta_{1}^{\#5\alpha} == 0$ 3

 $\Delta_{1}^{\#4\alpha} + \Delta_{1}^{\#3\alpha} == 0 \quad 3$

Total constraints: 12

 $\mathcal{T}_{0^{+}}^{\#2} == 0$

 $\Delta_{0+}^{\#4} == 0$

 $\mathcal{T}_{1}^{\#1\alpha} == 0$

Multiplicities

 $\Delta_{1}^{\#6}{}_{lpha}$

$(a_0^2 + (2a_1 + a_2) (2a_1 + a_2 + a_2) (2a_1 + a_2 + a_2)$ $a_9^2 - a_0 (6a_1 + 3a_2 + 3a_3)$			$(a_1 + a_2) (2 a_1 + a_2 + a_3)$	$+3a_3-16a_6+4a_7)-$ $+3-16a_6+4a_7+2a_9)))$	${3(a_0^2+(2a_1+a_2))}$	$\frac{4(2a_1+a_2+a_9)}{2(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}{0}$		0		0	0	0	0											
$\sqrt{2} \left(-\frac{1}{a_0 + 4a_1 - 4a_2} + (-2a_0 + 8a_1 + 4a_2 + 4a_2 + 4a_1 + 4a_2) \right) $ $ (a_0^2 + (2a_1 + a_2) (2a_1 + a_2 + 3a_3 + 4a_2 + 3a_2 + 3a_3 - 16a_1 + 4a_2 + 4a$	$a_3 - 16 a_6 + 4 a_7$) -		8 (a ₀ -4a ₁ -2a ₂ -3a ₃ +: +a ₂ +3a ₃ -16a ₆ +4a ₇)-a	16a ₆ -4a ₇ -2a ₉) 9 ² -a ₀ (6a ₁ +3a ₂ +3a ₃ -16a ₆ +4a ₇ +2	$\frac{1}{3(a_0^2 + (2a_1 + a_2))}$	$-\frac{4\sqrt{2}(2a_1+a_2+a_9)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$		0		0		0	0	0	0	0								
$4(2a_1+a_2+a_9)$ $0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0$		$-{3(a_0^2+(2a_1+a_2)(2a_1+$	$4\sqrt{2}(2a_1+a_2+a_3+a_3+16a_6+4a_7)-a_9$		$\frac{1}{9}$ $\frac{1}{3(a_0^2+(2a_1+a_2))}$	$4(a_0-2a_1-a_2)$ 2) $(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7)$	6a ₆ +4a ₇ +2a ₉))	0		0		0	0	0	0	0								
0			0			0		$\frac{4}{3} \left(-\frac{2}{2a_0 + 2a_1 + a_2 + 3a_3} + (a_0 - 4a_1 - 2a_1 + a_2) + (a_0^2 + (2a_1 + a_2)) (2a_1 + a_2) + (a_0^2 - a_0) (6a_1 + 3a_2 + 3a_2) \right)$		$(4\sqrt{2}(3a_0^2 - 4a_1^2 - a_2^2 - 3a_3(3a_3 + 4(-4a_6 + a_7)) - 6a_3a_9 - a_9^2 - 2a_2(3a_3 + a_9) - 4a_1(a_2 + 3a_9 + a_9) - 4a_1(a_2 + 3a_9 + a_9 + a_1) - 4a_1(a_2 + 3a_1 + a_2 + a_3 - 8a_1 + 2a_1 + a_2)))/$ $(3(2a_0 + 2a_1 + a_2 + 3a_3)$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_1 + 4a_1 + a_1)$ $a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_1 + 4a_1 + a_2)$	$(a_3 + a_9) - a_7$	0	0	$4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)$ $3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))$	$-((4(2a_1+a_2+a_9))/$ $(3\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-$ $a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))))$	0								
0			0			0		$(4\sqrt{2}(3a_0^2 - 4a_1^2 - a_2^2 - 3a_3(3a_3 + 4(-4a_6 + a_7)) - 6a_3a_9 - a_9^2 - 2a_2(3a_3 + a_9) - 4a_1(a_2 + 3a_3 + a_9) - 6a_0(2a_1 + a_2 + a_3 - 8a_6 + 2a_7 + a_9)))/$ $(3(2a_0 + 2a_1 + a_2 + 3a_3)$ $(a_0^2 + (2a_1 + a_2)(2a_1 + a_2 + 3a_3 - 16a_6 + 4a_7) - a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$ $a_9^2 - a_0(6a_1 + 3a_2 + 3a_3 - 16a_6 + 4a_7 + 2a_9)))$		0	0	$\frac{8(2a_1+a_2+a_9)}{3\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	O										
0			0			0		0		0	- 18 (a	$\frac{5}{0+4a_6-4a_7)}$ $\frac{1}{18(a_0+a_1)}$	$\sqrt{5}$ $(4a_6-4a_7)$	0	0	0								
0			0			0		0		0		$\frac{\sqrt{5}}{+4a_6-4a_7)} -18(a_0+4a_0)$	1	0	0	0								
0			0			0		$4\sqrt{\frac{2}{3}}(2a_1+a_2)$ $3(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2$		$\frac{8(2a_1+a_2+a_9)}{3\sqrt{3}(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7)}$		0		$\frac{8 (a_0 - 2 a_1 - a_2)}{9 (a_0^2 + (2 a_1 + a_2) (2 a_1 + a_2 + 3 a_3 - 16 a_6 + 4 a_7) - a_9^2 - a_0 (6 a_1 + 3 a_2 + 3 a_3 - 16 a_6 + 4 a_7 + 2 a_9))}$	$\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	<u></u>								
0		0		0		0		0		0		0		0		$-((4 (2 a_1 + a_2 + a_9)) / (3 \sqrt{3} (a_0^2 + (2 a_1 + a_2) (2 a_1)) / (2 a_1 + a_2) (2 a_1))$		$4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)$	16 <i>a</i> ₆ +4 <i>a</i> ₇ +2 <i>a</i> ₉))	0	0	$\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	4 (a ₀ -2 a ₁ -a ₂)	
0			0			0		0		0		0	0	0	0	0								
$\Gamma_{1}^{\#2}{}_{\alpha\beta}$	Γ ₁ +3 _{αβ}	Γ ₁ -1 _α	Γ# ² 1- α	Γ ₁ ^{#,3} α	Γ ₁ ^{#-4} α	Γ ₁ ⁵ _α		$\Gamma_{1-\alpha}^{\#6}$ $h_{1-\alpha}^{\#1}$			$\mathcal{T}_{0}^{\#}$ $\mathcal{T}_{0}^{\#}$	$\Delta_{0}^{\#1}$ $\Delta_{0}^{\#2}$ $\Delta_{0}^{\#3}$ $\Delta_{0}^{\#4}$			Γ ₀ # Γ ₀ # Γ ₀ # Γ ₀ # Γ ₀ +1 Γ ₀ -1									
$\left +5 a_2 \right \left -\frac{a_0 + 2 a_1 - 3 a_2}{2 \sqrt{2}} \right = \frac{1}{4} \left(-\frac{1}{4} \right) \left($	$(-2a_1-a_2-a_9)$	0	0	0	0	0		0 0	Quadratic (free) actions S ==	on		4+	1		+ + + + + + + + + + + + + + + + + + +									
$\frac{-3 a_2}{2}$ $\frac{1}{2} (-2 a_1 + a_2)$	$\frac{2a_1+a_2+a_9}{2\sqrt{2}}$	0	0	0	0	0		0 0	$\iiint (\frac{1}{24} (4 (4 a_1 + 2 a_2)$	$+3a_3-12a_6+2a_9)\Gamma_{\alpha \chi}^{\chi}\Gamma_{\beta}^{\alpha\beta}-6(a_0+6a_1+a_2+3a_3-$		240+26			$(-2a_{\rm C})$									
(a_2-a_9) $\frac{2a_1+a_2+a_9}{2\sqrt{2}}$ $\frac{3}{4}(a_0-4a_1-2a_2)$	$a_2 - 3a_3 + 16a_6 - 4a_7 - 2a_9$	0	0	0	0	0		0 0	$8a_6 - 4a_7 + 2a_9) \Gamma_{\alpha\beta\gamma}$	$ \begin{array}{cccccccccccccccccccccccccccccccccccc$	0 0 0	$ \begin{array}{c c} a_{1}+a_{2}+\\ 0\\ 0\\ \end{array} $	#1 0+		0 0 0 0 0 0 0 0 0 0 0	1 #								
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	$18a_2 \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\lambda} - 18a$ $12a_0 \Gamma_{\alpha\alpha\beta} \Gamma^{\alpha\beta\chi} - 12a$	${}_{3} \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} + 48 a_{6} \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} + 24 a_{7} \Gamma_{\alpha\chi\beta} \Gamma^{\alpha\beta\chi} - $ ${}_{0} \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} + 6 a_{1} \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - 9 a_{2} \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} + $		3 83	<u> </u>											
0	0	$\frac{a_0+a_3}{a_0+a_3}$ $\frac{1}{a_0+a_3}(-2a_1-a_2-a_3)$			$\frac{a_0+a_3}{a_0+a_3}$ $\frac{1}{a_0+a_3}(-2a_1-a_2-a_3)$ 0		$\frac{a_0+a_3}{a_0+a_3}$ $\frac{1}{a_0+a_3}$ $\frac{1}{a_0+a_3}$ 0 $\frac{2a_1+a_2+a_9}{a_0+a_3}$			$\frac{2a_1+a_2+a_9}{\alpha \chi \beta} = 0$ 0 0 0 0 0 0 0 0 0				6 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0			$3a_3$							

 $9 a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - 96 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} + 60 a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\alpha\chi} - 36 a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$

 $12 a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 30 a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 18 a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} - 192 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} +$

 $120 a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 12 a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\beta\chi\alpha} + 12 a_0 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma_{\beta}^{\chi} - 24 a_1 \Gamma^{\alpha}_{\alpha}^{\beta} \Gamma_{\beta}^{\chi} -$

 $12 a_2 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 12 a_3 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} + 96 a_6 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 48 a_7 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} -$

 $12 a_9 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} + 12 a_0 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 8 a_1 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} - 4 a_2 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} -$

 $12 a_3 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 96 a_6 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - 48 a_7 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - 4 a_9 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} -$

 $12 a_0 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 30 a_1 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 3 a_2 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 9 a_3 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha}$

 $8 a_1 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 4 a_2 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 12 a_3 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - 24 a_7 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} +$

 $12 a_0 \Gamma^{\alpha\beta\chi} \partial_{\beta} h_{\alpha\chi} - 6 a_0 \Gamma^{\alpha}_{\alpha}^{\beta} \partial_{\beta} h_{\chi}^{\chi} + 6 a_0 \Gamma^{\alpha\beta}_{\alpha} \partial_{\beta} h_{\chi}^{\chi} - 6 a_0 h_{\chi}^{\chi} \partial_{\beta} \Gamma^{\alpha}_{\alpha}^{\beta} +$

 $6 a_0 h_{\chi}^{\chi} \partial_{\beta} \Gamma^{\alpha\beta}_{\alpha} - 12 a_0 h_{\alpha\chi} \partial_{\beta} \Gamma^{\alpha\beta\chi} + 6 a_0 h^{\alpha\beta} \partial_{\beta} \partial_{\alpha} h_{\chi}^{\chi} - 3 a_0 \partial_{\beta} h_{\chi}^{\chi} \partial^{\beta} h_{\alpha}^{\alpha} +$

 $6 a_0 h^{\alpha\beta} \partial_{\chi} \partial^{\chi} h_{\alpha\beta} - 6 a_0 h^{\alpha}_{\alpha} \partial_{\chi} \partial^{\chi} h^{\beta}_{\beta} - 6 a_0 \partial_{\beta} h_{\alpha\chi} \partial^{\chi} h^{\alpha\beta} + 3 a_0 \partial_{\chi} h_{\alpha\beta} \partial^{\chi} h^{\alpha\beta} +$

 $12 a_0 h_{\beta\chi} \partial^{\chi} \Gamma^{\alpha}_{\alpha}{}^{\beta} + 48 a_1 \partial_{\alpha} \Gamma_{\beta\chi\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 48 a_1 \partial_{\alpha} \Gamma_{\beta\mu\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} -$

 $48 a_1 \partial_{\alpha} \Gamma_{\chi\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 48 a_1 \partial_{\alpha} \Gamma_{\chi\mu\beta} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 24 a_1 \partial_{\alpha} \Gamma_{\mu\beta\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} -$

 $24 a_1 \partial_{\alpha} \Gamma_{\mu \chi \beta} \partial^{\mu} \Gamma^{\alpha \beta \chi} - 48 a_1 \partial_{\beta} \Gamma_{\alpha \chi \mu} \partial^{\mu} \Gamma^{\alpha \beta \chi} + 24 a_1 \partial_{\beta} \Gamma_{\alpha \mu \chi} \partial^{\mu} \Gamma^{\alpha \beta \chi} -$

 $24 a_1 \partial_{\beta} \Gamma_{\chi\mu\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 24 a_1 \partial_{\chi} \Gamma_{\alpha\beta\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 24 a_1 \partial_{\chi} \Gamma_{\beta\alpha\mu} \partial^{\mu} \Gamma^{\alpha\beta\chi} +$

 $48 a_1 \partial_{\chi} \Gamma_{\beta\mu\alpha} \partial^{\mu} \Gamma^{\alpha\beta\chi} - 24 a_1 \partial_{\mu} \Gamma_{\alpha\beta\chi} \partial^{\mu} \Gamma^{\alpha\beta\chi} + 24 a_1 \partial_{\mu} \Gamma_{\alpha\chi\beta} \partial^{\mu} \Gamma^{\alpha\beta\chi} +$

 $12 a_0 \Gamma_{\alpha}^{\alpha\beta} \partial_{\chi} h_{\beta}^{\chi} + 6 a_0 \partial^{\beta} h_{\alpha}^{\alpha} \partial_{\chi} h_{\beta}^{\chi} - 12 a_0 h^{\alpha\beta} \partial_{\chi} \partial_{\beta} h_{\alpha}^{\chi} + 6 a_0 h_{\alpha}^{\alpha} \partial_{\chi} \partial_{\beta} h^{\beta\chi} +$

 $4 a_9 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} - 12 a_7 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\beta \chi} + 8 a_1 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi \beta} + 4 a_2 \Gamma^{\alpha \beta}_{\alpha} \Gamma^{\chi}_{\chi \beta} -$

 $12 a_7 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} + 4 a_9 \Gamma^{\alpha}_{\alpha}{}^{\beta} \Gamma^{\chi}_{\chi\beta} + 24 h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + 24 \Gamma^{\alpha\beta\chi} \Delta_{\alpha\beta\chi}$

 $96 a_6 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 60 a_7 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 12 a_9 \Gamma^{\alpha\beta\chi} \Gamma_{\chi\beta\alpha} + 12 a_0 \Gamma^{\alpha\beta}_{\alpha} \Gamma^{\chi}_{\beta\chi} +$

 $\Delta_{1-\alpha}^{\#2}$

 $\Delta_{1}^{#3}$ α

 $\begin{array}{c|c}
\Delta_{0+1}^{\#_{2}} \\
0 \\
0 \\
0
\end{array}$

 $\begin{array}{c|cccc}
\Delta_{0}^{\#1} & & \\
0 & & \\
0 & & \\
0 & & \\
0 & & \\
0 & & \\
a_{1}a_{2} & \\
\end{array}$