Particle spectrograph

Wave operator and propagator

	$\Delta_{1^+}^{\#1}{}_{\alpha\beta}$	$\Delta_{1^+}^{\#2}{}_{\alpha\beta}$	$\Delta_{1^+}^{\#3}{}_{\alpha\beta}$	$\Delta_{1^-}^{\#1}{}_{\alpha}$	$\Delta_{1^-}^{\#2}{}_{\alpha}$	$\Delta_{1^-}^{\#3}{}_{\alpha}$	$\Delta_{1^-}^{\#4}{}_{\alpha}$	$\Delta_{1^-}^{\#5}{}_{\alpha}$	$\Delta_{1^-}^{\#6}{}_{\alpha}$	$\mathcal{T}_{1^-}^{\#1}{}_{\alpha}$
$\Delta_{1^+}^{\#1\,\dagger\,\alpha\beta}$	$\frac{4}{3}\left(-\frac{1}{a_0+4a_1-4a_2}+(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)/(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))\right)$	$\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)/(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))\right)$	$\frac{4(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^+}^{\#2\,\dagger\,\alpha\beta}$	$\frac{2}{3}\sqrt{2}\left(-\frac{1}{a_0+4a_1-4a_2}+(-2a_0+8a_1+4a_2+6a_3-32a_6+8a_7+4a_9)/(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))\right)$	$-\frac{2}{3(a_0+4a_1-4a_2)}+\frac{8(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-\frac{4\sqrt{2}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^+}^{\#3\,\dagger\,\alpha\beta}$	$\frac{4(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-\frac{4\sqrt{2}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{4(a_0-2a_1-a_2)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^-}^{\#1\,\dagger\,\alpha}$	0	0	0	$\frac{4}{3}\left(-\frac{2}{2a_0+2a_1+a_2+3a_3}+(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)/(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))\right)$	$(4\sqrt{2}(3a_0{}^2-4a_1{}^2-a_2{}^2-3a_3(3a_3+4(-4a_6+a_7))-6a_3a_9-a_9{}^2-2a_2(3a_3+a_9)-4a_1(a_2+3a_3+a_9)-6a_0(2a_1+a_2+a_3-8a_6+2a_7+a_9)))/(3(2a_0+2a_1+a_2+3a_3)(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))$	0	0	$\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-\frac{(4(2a_1+a_2+a_9))/(3\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))}{}$	0
$\Delta_{1^-}^{\#2\,\dagger\,\alpha}$	0	0	0	$(4\sqrt{2}(3a_0{}^2-4a_1{}^2-a_2{}^2-3a_3(3a_3+4(-4a_6+a_7))-6a_3a_9-a_9{}^2-2a_2(3a_3+a_9)-4a_1(a_2+3a_3+a_9)-6a_0(2a_1+a_2+a_3-8a_6+2a_7+a_9)))/(3(2a_0+2a_1+a_2+3a_3)(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))$	$-\frac{4}{3(2a_0+2a_1+a_2+3a_3)}+\frac{8(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	$\frac{8(2a_1+a_2+a_9)}{3\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$-\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0
$\Delta_{1^-}^{\#3\,\dagger\,\alpha}$	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	0
$\Delta_{1^-}^{\#4\,\dagger\,\alpha}$	0	0	0	0	0	$\frac{\sqrt{5}}{18(a_0+4a_6-4a_7)}$	$\frac{1}{-18(a_0+4a_6)+72a_7}$	0	0	0
$\Delta_{1^-}^{\#5\,\dagger\,\alpha}$	0	0	0	$\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{8(2a_1+a_2+a_9)}{3\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	$\frac{8(a_0-2a_1-a_2)}{9(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0
$\Delta_{1^-}^{\#6\,\dagger\,\alpha}$	0	0	0	$-\frac{(4(2a_1+a_2+a_9))/(3\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)))}{}$	$-\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+a_9)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	$\frac{4\sqrt{2}(-a_0+2a_1+a_2)}{9(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{4(a_0-2a_1-a_2)}{9(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0
$\mathcal{T}_{1^-}^{\#1\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	0	0

	$\Gamma_{1^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{1^+}^{\#2}{}_{\alpha\beta}$	$\Gamma_{1^+}^{\#3}{}_{\alpha\beta}$	$\Gamma_{1^-}^{\#1}{}_{\alpha}$	$\Gamma_{1^-}^{\#2}{}_{\alpha}$	$\Gamma_{1^-}^{\#3}{}_{\alpha}$	$\Gamma_{1^-}^{\#4}{}_{\alpha}$	$\Gamma_{1^-}^{\#5}{}_{\alpha}$	$\Gamma_{1^-}^{\#6}{}_{\alpha}$	$h_{1^-}^{\#1}{}_{\alpha}$
$\Gamma_{1^+}^{\#1\,\dagger\,\alpha\beta}$	$\frac{1}{4}(-a_0-6a_1+5a_2)$	$-\frac{a_0+2a_1-3a_2}{2\sqrt{2}}$	$\frac{1}{4}(-2a_1-a_2-a_9)$	0	0	0	0	0	0	0
$\Gamma_{2^+}^{\#2\,\dagger\,\alpha\beta}$	$-\frac{a_0+2a_1-3a_2}{2\sqrt{2}}$	$\frac{1}{2}(-2a_1+a_2)$	$\frac{2a_1+a_2+a_9}{2\sqrt{2}}$	0	0	0	0	0	0	0
$\Gamma_{1^+}^{\#3\,\dagger\,\alpha\beta}$	$\frac{1}{4}(-2a_1-a_2-a_9)$	$\frac{2a_1+a_2+a_9}{2\sqrt{2}}$	$\frac{3}{4}(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)$	0	0	0	0	0	0	0
$\Gamma_{1^-}^{\#1\,\dagger\,\alpha}$	0	0	0	$\frac{1}{4}(-a_0-2a_1-a_2-2a_3)$	$\frac{a_0+a_3}{2\sqrt{2}}$	0	0	$-\frac{2a_1+a_2+a_9}{2\sqrt{6}}$	$\frac{2a_1+a_2+a_9}{4\sqrt{3}}$	0
$\Gamma_{2^-}^{\#2\,\dagger\,\alpha}$	0	0	0	$\frac{a_0+a_3}{2\sqrt{2}}$	$\frac{1}{4}(-2a_1-a_2-a_3)$	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	$-\frac{5}{2}(a_0+4a_6-4a_7)$	$\frac{1}{2}\sqrt{5}(a_0+4a_6-4a_7)$	0	0	0
$\Gamma_{1^-}^{\#4\,\dagger\,\alpha}$	0	0	0	0	0	$\frac{1}{2}\sqrt{5}(a_0+4a_6-4a_7)$	$-\frac{a_0}{2}-2a_6+2a_7$	0	0	0
$\Gamma_{1^-}^{\#5\,\dagger\,\alpha}$	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	$\frac{1}{2}(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)$	$\frac{-a_0+4a_1+2a_2+3a_3-16a_6+4a_7+2a_9}{2\sqrt{2}}$	0
$\Gamma_{1^-}^{\#6\,\dagger\,\alpha}$	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	$\frac{-a_0+4a_1+2a_2+3a_3-16a_6+4a_7+2a_9}{2\sqrt{2}}$	$\frac{1}{4}(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)$	0
$h_{1^-}^{\#1\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	0	0

	$\Gamma_{2^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{2^+}^{\#2}{}_{\alpha\beta}$	$\Gamma_{2^+}^{\#3}{}_{\alpha\beta}$	$h_{2^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{2^-}^{\#1}{}_{\alpha\beta\chi}$	$\Gamma_{2^-}^{\#2}{}_{\alpha\beta\chi}$
$\Gamma_{2^+}^{\#1\,\dagger\,\alpha\beta}$	$\frac{1}{4}(a_0-2a_1-a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	0	0	0
$\Gamma_{2^+}^{\#2\,\dagger\,\alpha\beta}$	0	$-3(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{2^+}^{\#3\,\dagger\,\alpha\beta}$	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	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	$-\frac{a_0k^2}{8}$	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	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$	$\frac{3}{4}(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)$

	$\Gamma_{0^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{0^+}^{\#2}{}_{\alpha\beta}$	$\Gamma_{0^+}^{\#3}{}_{\alpha\beta}$	$\Gamma_{0^+}^{\#4}{}_{\alpha\beta}$	$h_{0^+}^{\#1}{}_{\alpha\beta}$	$h_{0^+}^{\#2}{}_{\alpha\beta}$	$\Gamma_{0^-}^{\#1}{}_{\alpha}$	$\Gamma_{0^-}^{\#2}{}_{\alpha}$	$\Gamma_{0^-}^{\#3}{}_{\alpha}$	$\Gamma_{0^-}^{\#4}{}_{\alpha}$	$\mathcal{T}_{0^-}^{\#1}{}_{\alpha}$	$\mathcal{T}_{0^-}^{\#2}{}_{\alpha}$	$\Delta_{0^-}^{\#1}{}_{\alpha}$
$\Gamma_{0^+}^{\#1\,\dagger\,\alpha\beta}$	0	0	0	0	0	0	$\frac{1}{4}(2a_0-2a_1-a_2-3a_3)$	0	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{0^+}^{\#2\,\dagger\,\alpha\beta}$	0	0	0	0	0	0	0	$\frac{3}{2}(a_0+4a_6-4a_7)$	0	$\frac{1}{2}(a_0+4a_6-4a_7)$	0	0	0
$\Gamma_{0^+}^{\#3\,\dagger\,\alpha\beta}$	0	0	0	0	0	0	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	$\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{0^+}^{\#4\,\dagger\,\alpha\beta}$	0	0	0	0	0	0	0	$\frac{1}{2}(a_0+4a_6-4a_7)$	0	$\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0
$h_{0^+}^{\#1\,\dagger\,\alpha\beta}$	0	0	0	0	$\frac{a_0k^2}{4}$	0	0	0	0	0	0	0	0
$h_{0^+}^{\#2\,\dagger\,\alpha\beta}$	0	0	0	0	0	$\frac{a_0k^2}{4}$	0	0	0	0	0	0	0
$\Gamma_{0^-}^{\#1\,\dagger\,\alpha}$	0	0	0	0	0	0	$-\frac{a_0}{2}-2a_1+2a_2-6a_3k^2$	0	0	0	0	0	0
$\Gamma_{0^-}^{\#2\,\dagger\,\alpha}$	0	0	0	0	0	0	0	$\frac{1}{4}(2a_0-2a_1-a_2-3a_3)$	0	0	0	0	0
$\Gamma_{0^-}^{\#3\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{0^-}^{\#4\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	0	$\frac{1}{2}(a_0+4a_6-4a_7)$	0	0	0
$\mathcal{T}_{0^-}^{\#1\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	0	0	$-\frac{4}{a_0k^2}$	0	0
$\mathcal{T}_{0^-}^{\#2\,\dagger\,\alpha}$	0	0	0	0	0	0	0	0	0	0	0	0	0
$\Delta_{0^-}^{\#1\,\dagger\,\alpha}$	0	0	0	0	0	0	$\frac{2}{a_0+4a_1+2a_2+3a_3+12a_7}$	0	0	0	0	0	0

	$\Delta_{2^+}^{\#1}{}_{\alpha\beta}$	$\Delta_{2^+}^{\#2}{}_{\alpha\beta}$	$\Delta_{2^+}^{\#3}{}_{\alpha\beta}$	$\mathcal{T}_{2^+}^{\#1}{}_{\alpha\beta}$	$\Delta_{2^-}^{\#1}{}_{\alpha\beta\chi}$	$\Delta_{2^-}^{\#2}{}_{\alpha\beta\chi}$
$\Delta_{2^+}^{\#1\,\dagger\,\alpha\beta}$	$\frac{4(a_0-4a_1-2a_2-3a_3+16a_6-4a_7-2a_9)}{a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	0	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	0	0	0
$\Delta_{2^+}^{\#2\,\dagger\,\alpha\beta}$	0	$\frac{1}{-3(a_0+4a_6)+12a_7}$	0	0	0	0
$\Delta_{2^+}^{\#3\,\dagger\,\alpha\beta}$	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	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
$\mathcal{T}_{2^+}^{\#1\,\dagger\,\alpha\beta}$	0	0	0	$-\frac{8}{a_0k^2}$	0	0
$\Delta_{2^-}^{\#1\,\dagger\,\alpha\beta\chi}$	0	0	0	0	$\frac{4(2a_1+a_2+a_9)}{a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9)}$	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$
$\Delta_{2^-}^{\#2\,\dagger\,\alpha\beta\chi}$	0	0	0	0	$\frac{4(2a_1+a_2+a_9)}{\sqrt{3}(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$	$\frac{4(a_0-2a_1-a_2)}{3(a_0{}^2+(2a_1+a_2)(2a_1+a_2+3a_3-16a_6+4a_7)-a_9{}^2-a_0(6a_1+3a_2+3a_3-16a_6+4a_7+2a_9))}$

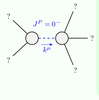
	Source constraints/gauge generators	Multiplicities
$\mathcal{T}_{0^+}^{\#2}=0$	SO(3) irreps	1
$\Delta_{0^+}^{\#1}=0$	$\Delta_{0^+}^{\#1}+3\Delta_{0^+}^{\#2}=0$	1
$\mathcal{T}_{1^-}^{\#1}=0$	$\mathcal{T}_{1^-}^{\#1}=0$	3
$\Delta_{1^-}^{\#6}=0$	$\Delta_{1^-}^{\#4}+\Delta_{1^-}^{\#5}=0$	3
$\Delta_{1^-}^{\#4}=0$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

Quadratic (free) action

$\mathcal{S}_F ==$

$\int\int\int\int(\frac{1}{24}(4(4a_1+2a_2+3a_3-12a_6+2a_9)\,\Gamma_{\alpha}{}^{\chi}{}_{\chi}\,\Gamma^{\alpha\beta}{}_{\beta}-6(a_0+6a_1+a_2+3a_3-8a_6-4a_7+2a_9)\,\Gamma_{\alpha\beta\chi}\,\Gamma^{\alpha\beta\chi}-6(a_0+2a_1+3a_2+3a_3-32a_6+20a_7)\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\alpha\beta\chi}+3(-4a_0+2a_1+5a_2+3a_3-32a_6+20a_7+2a_9)\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\beta\alpha\chi}+6(-6a_0+2a_1+5a_2+3a_3-32a_6+20a_7+2a_9)\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\beta\chi\alpha}+12(a_0-2a_1-a_2-a_3+8a_6-4a_7-a_9)\,\Gamma^{\alpha}{}_{\alpha}{}^{\beta}\,\Gamma_{\beta}{}^{\chi}{}_{\chi}+4(3a_0-2a_1-a_2-3a_3+24a_6-12a_7-a_9)\,\Gamma^{\alpha\beta}{}_{\alpha}\,\Gamma_{\beta}{}^{\chi}{}_{\chi}+3(-4a_0+10a_1+a_2+3a_3-32a_6+20a_7+4a_9)\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\chi\beta\alpha}+4(3a_0+2a_1+a_2+3a_3-6a_7+a_9)\,\Gamma^{\alpha}{}_{\alpha}{}^{\beta}\,\Gamma^{\chi}{}_{\beta\chi}-12a_7\,\Gamma^{\alpha\beta}{}_{\alpha}\,\Gamma^{\chi}{}_{\beta\chi}+4(2a_1+a_2-3a_7+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}-12a_0\,\Gamma^{\alpha\beta\chi}\,\partial_{\beta}h_{\alpha\chi}-6a_0\,\Gamma^{\alpha}{}_{\alpha}{}^{\beta}\,\partial_{\beta}h^{\chi}{}_{\chi}+6a_0\,\Gamma^{\alpha\beta}{}_{\alpha}\,\partial_{\beta}h^{\chi}{}_{\chi}-6a_0\,h^{\chi}{}_{\chi}\,\partial_{\beta}\Gamma^{\alpha}{}_{\alpha}{}^{\beta}+6a_0\,h^{\chi}{}_{\chi}\,\partial_{\beta}\Gamma^{\alpha\beta}{}_{\alpha}-12a_0\,h_{\beta\chi}\,\partial_{\beta}\Gamma^{\alpha\beta\chi}+6a_0\,h^{\alpha\beta}\,\partial_{\beta}\partial_{\alpha}h^{\chi}{}_{\chi}-3a_0\,\partial_{\beta}h^{\chi}{}_{\chi}\,\partial^{\beta}h^{\alpha}{}_{\alpha}+12a_0\,\Gamma^{\alpha}{}_{\alpha}{}^{\beta}\,\partial_{\chi}h_{\beta}{}^{\chi}+6a_0\,\partial^{\beta}h^{\alpha}{}_{\alpha}\,\partial_{\chi}h_{\beta}{}^{\chi}-12a_0\,h^{\alpha\beta}\,\partial_{\chi}\partial_{\beta}h_{\alpha}{}^{\chi}+6a_0\,h^{\alpha}{}_{\alpha}\,\partial_{\chi}\partial_{\beta}h^{\beta\chi}+6a_0\,h^{\alpha\beta}\,\partial_{\chi}\partial^{\chi}h_{\alpha\beta}-6a_0\,\partial_{\beta}h_{\alpha\chi}\,\partial^{\chi}h^{\alpha\beta}+3a_0\,\partial_{\chi}h_{\alpha\beta}\,\partial^{\chi}h^{\alpha\beta}+12a_0\,h_{\beta\chi}\,\partial^{\chi}\Gamma^{\alpha}{}_{\alpha}{}^{\beta}+48a_1\,\partial_{\alpha}\Gamma_{\beta\chi\mu}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}-48a_1\,\partial_{\alpha}\Gamma_{\beta\chi\mu}\,\partial^{\nu}\Gamma^{\alpha\beta\chi}+48a_1\,\partial_{\alpha}\Gamma_{\chi\mu\beta}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\alpha}\Gamma_{\mu\beta\chi}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\alpha}\Gamma_{\mu\chi\beta}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}-48a_1\,\partial_{\beta}\Gamma_{\alpha\chi\mu}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\beta}\Gamma_{\alpha\mu\chi}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\beta}\Gamma_{\chi\mu\alpha}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\chi}\Gamma_{\alpha\beta\mu}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+48a_1\,\partial_{\chi}\Gamma_{\beta\mu\alpha}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}-24a_1\,\partial_{\mu}\Gamma_{\alpha\beta\chi}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\mu}\Gamma_{\alpha\chi\beta}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}-48a_1\,\partial_{\mu}\Gamma_{\beta\chi\alpha}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\mu}\Gamma_{\chi\beta\alpha}\,\partial^{\mu}\Gamma^{\alpha\beta\chi}+24a_1\,\partial_{\nu}\partial_{\mu}h_{\alpha\mu}\,\partial^{\nu}\partial^{\chi}h^{\alpha\beta}-24a_1\,\partial_{\nu}\partial_{\mu}h_{\alpha\chi}\,\partial^{\nu}\partial^{\chi}h^{\alpha\beta}))[t,x,y,z]\,dz\,dy\,dx\,dt$

Massive and massless spectra



Massive particle	
Pole residue:	$\frac{1}{6a_1}>0$
Polarisations:	1
Square mass:	$-\frac{a_0+4a_1-4a_2}{12a_1}>0$
Spin:	0
Parity:	Odd

Quadratic pole	
Pole residue:	$-\frac{1}{a_0}>0$
Polarisations:	2

Unitarity conditions

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