Particle spectrograph

Wave operator and propagator

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

Quadratic (free) action

$\mathcal{S}==\iiiint(\frac{1}{24}(4(4a_1+2a_2+3a_3-12a_6+2a_9)\Gamma_\alpha{}^\chi{}_\chi\Gamma^{\alpha\beta}{}_\beta-$
$6(a_0+6a_1+a_2+3a_3-8a_6-4a_7+2a_9)\Gamma_{\alpha\beta\chi}\Gamma^{\alpha\beta\chi}-$
$6a_0\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}-12a_1\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}-18a_2\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}-$
$18a_3\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}+48a_6\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}+$
$24a_7\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}-12a_9\Gamma_{\alpha\chi\beta}\Gamma^{\alpha\beta\chi}-12a_0\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}+$
$6a_1\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}-9a_2\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}+9a_3\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}-$
$96a_6\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}+60a_7\Gamma^{\alpha\beta\chi}\Gamma_{\beta\alpha\chi}-36a_0\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+$
$12a_1\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+30a_2\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+18a_3\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}-$
$192a_6\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+120a_7\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+$
$12a_9\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha}+12a_0\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi-24a_1\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi-$
$12a_2\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi-12a_3\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi+96a_6\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi-$
$48a_7\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi-12a_9\Gamma^\alpha{}_\alpha{}^\beta\Gamma_\beta{}^\chi{}_\chi+12a_0\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-$
$8a_1\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-4a_2\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-12a_3\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi+$
$96a_6\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-48a_7\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-4a_9\Gamma^{\alpha\beta}{}_\alpha\Gamma_\beta{}^\chi{}_\chi-$
$12a_0\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+30a_1\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+3a_2\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+$
$9a_3\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}-96a_6\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+60a_7\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+$
$12a_9\Gamma^{\alpha\beta\chi}\Gamma_{\chi\beta\alpha}+12a_0\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}+8a_1\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}+$
$4a_2\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}+12a_3\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}-24a_7\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}+$
$4a_9\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\beta\chi}-12a_7\Gamma^{\alpha\beta}{}_\alpha\Gamma^\chi{}_{\beta\chi}+8a_1\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\chi\beta}+$
$4a_2\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\chi\beta}-12a_7\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\chi\beta}+4a_9\Gamma^\alpha{}_\alpha{}^\beta\Gamma^\chi{}_{\chi\beta}+$
$24h^{\alpha\beta}\mathcal{T}_{\alpha\beta}+24\Gamma^{\alpha\beta\chi}\Delta_{\alpha\beta\chi}-12a_0\Gamma^{\alpha\beta\chi}\partial_\beta h_{\alpha\chi}-$
$6a_0\Gamma^\alpha{}_\alpha{}^\beta\partial_\beta h^\chi{}_\chi+6a_0\Gamma^{\alpha\beta}{}_\alpha\partial_\beta h^\chi{}_\chi-6a_0h^\chi{}_\chi\partial_\beta\Gamma^\alpha{}_\alpha{}^\beta+$
$6a_0h^\chi{}_\chi\partial_\beta\Gamma^{\alpha\beta}{}_\alpha-12a_0h_{\alpha\chi}\partial_\beta\Gamma^{\alpha\beta\chi}+6a_0h^{\alpha\beta}\partial_\beta\partial_\alpha h^\chi{}_\chi-$
$3a_0\partial_\beta h^\chi{}_\chi\partial^\beta h^\alpha{}_\alpha+12a_0\Gamma^\alpha{}_\alpha{}^\beta\partial_\chi h_\beta{}^\chi+6a_0\partial^\beta h^\alpha{}_\alpha\partial_\chi h_\beta{}^\chi-$
$12a_0h^{\alpha\beta}\partial_\chi\partial_\beta h_\alpha{}^\chi+6a_0h^\alpha{}_\alpha\partial_\chi\partial_\beta h^{\beta\chi}+$
$6a_0h^{\alpha\beta}\partial_\chi\partial^\chi h_{\alpha\beta}-6a_0h^\alpha{}_\alpha\partial_\chi\partial^\chi h^\beta{}_\beta-6a_0\partial_\beta h_{\alpha\chi}\partial^\chi h^{\alpha\beta}+$
$3a_0\partial_\chi h_{\alpha\beta}\partial^\chi h^{\alpha\beta}+12a_0h_{\beta\chi}\partial^\chi\Gamma^\alpha{}_\alpha{}^\beta+$
$48a_1\partial_\alpha\Gamma_{\beta\chi\mu}\partial^\mu\Gamma^{\alpha\beta\chi}-48a_1\partial_\alpha\Gamma_{\beta\mu\chi}\partial^\mu\Gamma^{\alpha\beta\chi}-$
$48a_1\partial_\alpha\Gamma_{\chi\beta\mu}\partial^\mu\Gamma^{\alpha\beta\chi}+48a_1\partial_\alpha\Gamma_{\chi\mu\beta}\partial^\mu\Gamma^{\alpha\beta\chi}+$
$24a_1\partial_\alpha\Gamma_{\mu\beta\chi}\partial^\mu\Gamma^{\alpha\beta\chi}-24a_1\partial_\alpha\Gamma_{\mu\chi\beta}\partial^\mu\Gamma^{\alpha\beta\chi}-$
$48a_1\partial_\beta\Gamma_{\alpha\chi\mu}\partial^\mu\Gamma^{\alpha\beta\chi}+24a_1\partial_\beta\Gamma_{\alpha\mu\chi}\partial^\mu\Gamma^{\alpha\beta\chi}-$
$24a_1\partial_\beta\Gamma_{\chi\mu\alpha}\partial^\mu\Gamma^{\alpha\beta\chi}+24a_1\partial_\chi\Gamma_{\alpha\beta\mu}\partial^\mu\Gamma^{\alpha\beta\chi}-$
$24a_1\partial_\chi\Gamma_{\beta\alpha\mu}\partial^\mu\Gamma^{\alpha\beta\chi}+48a_1\partial_\chi\Gamma_{\beta\mu\alpha}\partial^\mu\Gamma^{\alpha\beta\chi}-$
$24a_1\partial_\mu\Gamma_{\alpha\beta\chi}\partial^\mu\Gamma^{\alpha\beta\chi}+24a_1\partial_\mu\Gamma_{\alpha\chi\beta}\partial^\mu\Gamma^{\alpha\beta\chi}+$
$24a_1\partial_\mu\Gamma_{\beta\alpha\chi}\partial^\mu\Gamma^{\alpha\beta\chi}-48a_1\partial_\mu\Gamma_{\beta\chi\alpha}\partial^\mu\Gamma^{\alpha\beta\chi}+$
$24a_1\partial_\mu\Gamma_{\chi\beta\alpha}\partial^\mu\Gamma^{\alpha\beta\chi}+24a_1\partial_\chi\partial_\beta h_{\alpha\mu}\partial^\mu\partial^\chi h^{\alpha\beta}-$
$24a_1\partial_\mu\partial_\beta h_{\alpha\chi}\partial^\mu\partial^\chi h^{\alpha\beta}))[t,x,y,z]dzdydxdt$

	$\Delta_{0^+}^{\#1}$	$\Delta_{0^+}^{\#2}$	$\Delta_{0^+}^{\#3}$	$\Delta_{0^+}^{\#4}$	$\mathcal{T}_{0^+}^{\#1}$	$\mathcal{T}_{0^+}^{\#2}$	$\Delta_{0^-}^{\#1}$
$\Delta_{0^+}^{\#1}\dagger$	$-\frac{4}{2a_0+2a_1+a_2+3a_3}$	0	0	0	0	0	0
$\Delta_{0^+}^{\#2}\dagger$	0	$\frac{1}{-6(a_0+4a_6)+24a_7}$	$\frac{1}{6(a_0+4a_6-4a_7)}$	0	0	0	0
$\Delta_{0^+}^{\#3}\dagger$	0	$\frac{1}{6a_0+24a_6-24a_7}$	$\frac{1}{-6(a_0+4a_6)+24a_7}$	0	0	0	0
$\Delta_{0^+}^{\#4}\dagger$	0	0	0	0	0	0	0
$\mathcal{T}_{0^+}^{\#1}\dagger$	0	0	0	0	$\frac{4}{a_0k^2}$	0	0
$\mathcal{T}_{0^+}^{\#2}\dagger$	0	0	0	0	0	0	0
$\Delta_{0^-}^{\#1}\dagger$	0	0	0	0	0	0	$-\frac{2}{a_0+4(a_1-a_2+3a_1k^2)}$

	$\Delta_{3^-}^{\#1}{}_{\alpha\beta\chi}$
$\Delta_{3^-}^{\#1}\dagger^{\alpha\beta\chi}$	$\frac{1}{-3(a_0+4a_6)+12a_7}$

Source constraints

SO(3) irreps	Fundamental fields	Multiplicities
$\mathcal{T}_{0^+}^{\#2}==0$	$\partial_\beta\partial_\alpha\mathcal{T}^{\alpha\beta}==0$	1
$\Delta_{0^+}^{\#4}==0$	$2\partial_\alpha\Delta^{\alpha\beta}{}_\beta==\partial_\beta\Delta^\alpha{}_\alpha{}^\beta+\partial_\beta\Delta^{\alpha\beta}{}_\alpha$	1
$\Delta_{0^+}^{\#3}+3\Delta_{0^+}^{\#2}==0$	$\partial_\alpha\Delta^{\alpha\beta}{}_\beta+\partial_\beta\Delta^\alpha{}_\alpha{}^\beta+\partial_\beta\Delta^{\alpha\beta}{}_\alpha==0$	1
$\mathcal{T}_{1^-}^{\#1\alpha}==0$	$\partial_\chi\partial_\beta\partial^\alpha\mathcal{T}^{\beta\chi}==\partial_\chi\partial^\chi\partial_\beta\mathcal{T}^{\alpha\beta}$	3
$\Delta_{1^-}^{\#6\alpha}+\Delta_{1^-}^{\#5\alpha}==0$	$2\partial_\beta\partial^\alpha\Delta^{\beta\chi}{}_\chi+\partial_\chi\partial^\chi\Delta^{\beta\alpha}{}_\beta+\partial_\chi\partial^\chi\Delta^\beta{}_\beta{}^\alpha==\partial_\chi\partial^\alpha\Delta^\beta{}_\beta{}^\chi+\partial_\chi\partial^\alpha\Delta^{\beta\chi}{}_\beta+2\partial_\chi\partial^\chi\Delta^{\alpha\beta}{}_\beta$	3
$\Delta_{1^-}^{\#4\alpha}+\Delta_{1^-}^{\#3\alpha}==0$	$\partial_\beta\partial^\alpha\Delta^{\beta\chi}{}_\chi+\partial_\chi\partial^\alpha\Delta^\beta{}_\beta{}^\chi+\partial_\chi\partial^\alpha\Delta^{\beta\chi}{}_\beta==\partial_\chi\partial^\chi\Delta^{\alpha\beta}{}_\beta+\partial_\chi\partial^\chi\Delta^{\beta\alpha}{}_\beta+\partial_\chi\partial^\chi\Delta^\beta{}_\beta{}^\alpha$	3
Total constraints/gauge generators:		12

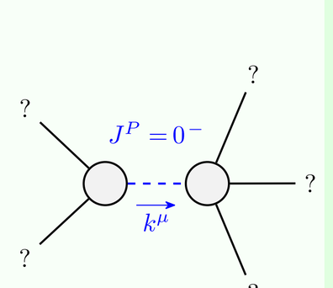
	$\Gamma_{0^+}^{\#1}$	$\Gamma_{0^+}^{\#2}$	$\Gamma_{0^+}^{\#3}$	$\Gamma_{0^+}^{\#4}$	$h_{0^+}^{\#1}$	$h_{0^+}^{\#2}$	$\Gamma_{0^-}^{\#1}$
$\Gamma_{0^+}^{\#1}\dagger$	$\frac{1}{4}(-2a_0-2a_1-a_2-3a_3)$	0	0	0	0	0	0
$\Gamma_{0^+}^{\#2}\dagger$	0	$-\frac{3}{2}(a_0+4a_6-4a_7)$	$\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{0^+}^{\#3}\dagger$	0	$\frac{3}{2}(a_0+4a_6-4a_7)$	$-\frac{3}{2}(a_0+4a_6-4a_7)$	0	0	0	0
$\Gamma_{0^+}^{\#4}\dagger$	0	0	0	0	0	0	0
$h_{0^+}^{\#1}\dagger$	0	0	0	0	$\frac{a_0k^2}{4}$	0	0
$h_{0^+}^{\#2}\dagger$	0	0	0	0	0	0	0
$\Gamma_{0^-}^{\#1}\dagger$	0	0	0	0	0	0	$-\frac{a_0}{2}-2a_1+2a_2-6a_1k^2$

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

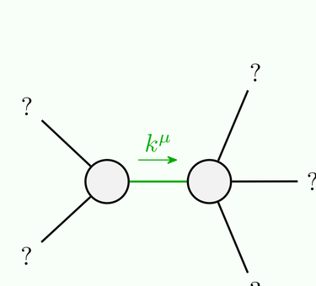
	$\Gamma_{2^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{2^+}^{\#2}{}_{\alpha\beta}$	$\Gamma_{2^+}^{\#3}{}_{\alpha\beta}$	$h_{2^+}^{\#1}{}_{\alpha\beta}$	$\Gamma_{2^-}^{\#1}{}_{\alpha\beta\chi}$	$\Gamma_{2^-}^{\#2}{}_{\alpha\beta\chi}$
$\Gamma_{2^+}^{\#1}\dagger^{\alpha\beta}$	$\frac{1}{4}(a_0-2a_1-a_2)$	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+a_9)$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

	$\Gamma_{3^-}^{\#1}{}_{\alpha\beta\chi}$
$\Gamma_{3^-}^{\#1}\dagger^{\alpha\beta\chi}$	$-3(a_0+4a_6-4a_7)$

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

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