

## Wave operator and propagator

	$\Delta_{1+\alpha\beta}^{\#1}$	$\Delta_{1+\alpha\beta}^{\#2}$	$\Delta_{1+\alpha\beta}^{\#3}$	$\Delta_{1-\alpha}^{\#1}$	$\Delta_{1-\alpha}^{\#2}$	$\Delta_{1-\alpha}^{\#3}$	$\Delta_{1-\alpha}^{\#4}$	$\Delta_{1-\alpha}^{\#5}$	$\Delta_{1-\alpha}^{\#6}$	$\mathcal{T}_{1-\alpha}^{\#1}$
$\Delta_{1+}^{\#1} \uparrow^{\alpha\beta}$	0	$-\frac{2\sqrt{2}}{a_0}$	0	0	0	0	0	0	0	0
$\Delta_{1+}^{\#2} \uparrow^{\alpha\beta}$	$-\frac{2\sqrt{2}}{a_0}$	$\frac{2(a_0^2-14a_0a_1k^2-35a_1^2k^4)}{a_0^2(a_0-29a_1k^2)}$	$\frac{40\sqrt{2}a_1k^2}{a_0^2-29a_0a_1k^2}$	0	0	0	0	0	0	0
$\Delta_{1+}^{\#3} \uparrow^{\alpha\beta}$	0	$\frac{40\sqrt{2}a_1k^2}{a_0^2-29a_0a_1k^2}$	$\frac{4}{a_0-29a_1k^2}$	0	0	0	0	0	0	0
$\Delta_{1-}^{\#1} \uparrow^{\alpha}$	0	0	0	0	$\frac{\sqrt{2}(4+k^2)}{a_0(2+k^2)}$	$-\frac{2k^2}{\sqrt{3}a_0(2+k^2)}$	0	$\frac{\frac{\sqrt{2}}{3}k^2}{a_0(2+k^2)}$	0	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#2} \uparrow^{\alpha}$	0	0	0	$\frac{\sqrt{2}(4+k^2)}{a_0(2+k^2)}$	$\frac{a_0^2(4+k^2)^2-30a_0a_1k^2(4+k^2)+(4+3k^2)+a_1^2k^4(6416+7928k^2+1901k^4)}{2a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{k^2(a_0^2(-2+k^2)+a_0a_1(560+302k^2+71k^4)-2a_1^2k^2(9440+1901k^2(4+k^2)))}{2\sqrt{6}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$-\frac{\sqrt{\frac{5}{6}}k^2(a_0+a_1(40-31k^2))}{2a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{k^2(2a_0^2(5+2k^2)-a_0a_1(880+778k^2+199k^4)+a_1^2k^2(9440+1901k^2(4+k^2)))}{2\sqrt{3}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{k^2(-a_0+a_1(200+43k^2))}{\sqrt{6}a_0(2+k^2)(a_0-33a_1k^2)}$	$-\frac{ik(-30a_0a_1k^4+a_0^2(4+k^2)+27a_1^2k^4(-28+3k^2))}{a_0^2(2+k^2)^2(a_0-33a_1k^2)}$
$\Delta_{1-}^{\#3} \uparrow^{\alpha}$	0	0	0	$-\frac{2k^2}{\sqrt{3}(2a_0+a_0k^2)}$	$\frac{k^2(a_0^2(-2+k^2)+a_0a_1(560+302k^2+71k^4)-2a_1^2k^2(9440+1901k^2(4+k^2)))}{2\sqrt{6}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{-a_0^2(76+52k^2+3k^4)+4a_0a_1k^2(472+214k^2+19k^4)+4a_1^2k^4(5120+7280k^2+1901k^4)}{12a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{\sqrt{5}(10a_0+(3a_0-328a_1)k^2-62a_1k^4)}{12a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{2a_0^2(-2+k^2)+a_0a_1k^2(472+934k^2+289k^4)-2a_1^2k^4(5120+7280k^2+1901k^4)}{6\sqrt{2}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{2a_0+(3a_0-56a_1)k^2+86a_1k^4}{6a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{ik(54a_1^2k^4(40+3k^2)+a_0^2(6+5k^2)-3a_0a_1k^2(86+23k^2))}{\sqrt{6}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$
$\Delta_{1-}^{\#4} \uparrow^{\alpha}$	0	0	0	0	$-\frac{\sqrt{\frac{5}{6}}k^2(a_0+a_1(40-31k^2))}{2a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{\sqrt{5}(10a_0+k^2(3a_0-2a_1(164+31k^2)))}{12a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{1}{12a_0-396a_1k^2}$	$\frac{\sqrt{\frac{5}{2}}(-2a_0+a_1k^2(164+31k^2))}{6a_0(2+k^2)(a_0-33a_1k^2)}$	$-\frac{\sqrt{5}}{6(a_0-33a_1k^2)}$	$-\frac{i\sqrt{\frac{5}{6}}k(a_0-51a_1k^2)}{a_0(2+k^2)(a_0-33a_1k^2)}$
$\Delta_{1-}^{\#5} \uparrow^{\alpha}$	0	0	0	$\frac{\sqrt{\frac{2}{3}}k^2}{2a_0+a_0k^2}$	$\frac{k^2(2a_0^2(5+2k^2)-a_0a_1(880+778k^2+199k^4)+a_1^2k^2(9440+1901k^2(4+k^2)))}{2\sqrt{2}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{2a_0^2(-2+k^2)+a_0a_1k^2(472+934k^2+289k^4)-2a_1^2k^4(5120+7280k^2+1901k^4)}{6\sqrt{2}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{\sqrt{\frac{5}{2}}(-2a_0+a_1k^2(164+31k^2))}{6a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{4a_0^2(17+14k^2+3k^4)-4a_0a_1k^2(236+287k^2+77k^4)+a_1^2k^4(5120+7280k^2+1901k^4)}{6a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{a_1k^2(28-43k^2)+2a_0(7+3k^2)}{3\sqrt{2}a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{ik(2a_0^2(3+k^2)-27a_1^2k^4(40+3k^2)+3a_0a_1k^2(34+7k^2))}{\sqrt{3}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$
$\Delta_{1-}^{\#6} \uparrow^{\alpha}$	0	0	0	0	$\frac{k^2(-a_0+a_1(200+43k^2))}{\sqrt{6}a_0(2+k^2)(a_0-33a_1k^2)}$	$-\frac{2a_0+(3a_0-56a_1)k^2+86a_1k^4}{6a_0(2+k^2)(a_0-33a_1k^2)}$	$-\frac{\sqrt{5}}{6(a_0-33a_1k^2)}$	$-\frac{a_1k^2(28-43k^2)+2a_0(7+3k^2)}{3\sqrt{2}a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{5}{3(a_0-33a_1k^2)}$	$-\frac{i\sqrt{\frac{2}{3}}k(a_0+57a_1k^2)}{a_0(2+k^2)(a_0-33a_1k^2)}$
$\mathcal{T}_{1-}^{\#1} \uparrow^{\alpha}$	0	0	0	$\frac{2i\sqrt{2}k}{2a_0+a_0k^2}$	$\frac{i(-30a_0a_1k^5+a_0^2k(4+k^2)+27a_1^2k^5(-28+3k^2))}{a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$-\frac{i(54a_1^2k^5(40+3k^2)+a_0^2k(6+5k^2)-3a_0a_1k^3(86+23k^2))}{\sqrt{6}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{i\sqrt{\frac{5}{6}}k(a_0-51a_1k^2)}{a_0(2+k^2)(a_0-33a_1k^2)}$	$-\frac{i(2a_0^2k(3+k^2)-27a_1^2k^5(40+3k^2)+3a_0a_1k^3(34+7k^2))}{\sqrt{3}a_0^2(2+k^2)^2(a_0-33a_1k^2)}$	$\frac{i\sqrt{\frac{2}{3}}k(a_0+57a_1k^2)}{a_0(2+k^2)(a_0-33a_1k^2)}$	$\frac{2k^2(a_0^2+30a_0a_1k^2-459a_1^2k^4)}{a_0^2(2+k^2)^2(a_0-33a_1k^2)}$

$$\begin{aligned}
S = & \iiint \left( \frac{1}{4} (2a_0 \Gamma_{\alpha}^{\alpha\beta} \Gamma_{\beta\chi}^{\chi} + 4 h^{\alpha\beta} \Gamma_{\alpha\beta}^{\alpha\beta\chi} + \Gamma^{\alpha\beta\chi\chi} (-2a_0 \Gamma_{\beta\chi\alpha} + 4 \Delta_{\alpha\beta\chi}) - \right. \\
& a_0 h_{\chi}^{\chi} \partial_{\chi} \Gamma_{\alpha}^{\alpha\beta} + a_0 h_{\chi}^{\chi} \partial_{\beta} \Gamma_{\chi\alpha}^{\alpha\beta} - 2 a_0 h_{\alpha\chi} \partial_{\beta} \Gamma^{\alpha\beta\chi} + \\
& 22 a_1 \partial^{\alpha} \Gamma_{\delta}^{\delta} \partial_{\beta} \Gamma_{\chi\alpha}^{\alpha\beta} + 2 a_1 \partial^{\alpha} \Gamma_{\chi\alpha}^{\alpha\beta} \partial_{\beta} \Gamma^{\chi\delta} - \\
& 76 a_1 \partial^{\alpha} \Gamma_{\chi}^{\chi\delta} \partial_{\beta} \Gamma_{\delta\alpha}^{\alpha\beta} + 2 a_0 h_{\beta\chi} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - \\
& 2 a_1 \partial_{\beta} \Gamma_{\chi}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - 2 a_1 \partial_{\beta} \Gamma_{\delta\chi}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} + \\
& 2 a_1 \partial_{\chi} \Gamma_{\beta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - 2 a_1 \partial_{\chi} \Gamma_{\delta\beta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - \\
& 2 a_1 \partial_{\chi} \Gamma_{\delta\beta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - 22 a_1 \partial_{\beta} \Gamma_{\chi}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} + \\
& 38 a_1 \partial_{\beta} \Gamma_{\chi\delta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} + 22 a_1 \partial_{\chi} \Gamma_{\beta\delta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} - \\
& 2 a_1 \partial_{\chi} \Gamma_{\delta\beta}^{\delta} \partial^{\alpha} \Gamma_{\alpha}^{\beta} + 4 a_1 \partial_{\alpha} \Gamma_{\chi}^{\delta} \partial^{\alpha} \Gamma_{\beta}^{\alpha\beta} - \\
& 4 a_1 \partial_{\chi} \Gamma_{\alpha}^{\delta} \partial^{\alpha} \Gamma_{\beta}^{\alpha\beta} - 2 a_1 \partial_{\chi} \Gamma^{\alpha\beta\chi} \partial_{\delta} \Gamma_{\alpha\beta}^{\delta} - \\
& 2 a_1 \partial_{\beta} \Gamma^{\alpha\beta\chi} \partial_{\delta} \Gamma_{\alpha\chi}^{\delta} - 2 a_1 \partial_{\beta} \Gamma^{\alpha\beta\chi} \partial_{\delta} \Gamma_{\alpha}^{\delta} + \\
& 38 a_1 \partial_{\chi} \Gamma^{\alpha\beta\chi} \partial_{\delta} \Gamma_{\beta\alpha}^{\delta} + 4 a_1 \partial^{\alpha} \Gamma_{\alpha}^{\beta} \partial_{\delta} \Gamma_{\beta}^{\chi\delta} - \\
& 22 a_1 \partial^{\alpha} \Gamma_{\beta}^{\alpha\beta} \partial_{\delta} \Gamma_{\chi\alpha}^{\delta} + 2 a_1 \partial^{\alpha} \Gamma_{\alpha}^{\beta} \partial_{\delta} \Gamma_{\chi\beta}^{\chi\delta} - \\
& 2 a_1 \partial_{\beta} \Gamma^{\alpha\beta\chi} \partial_{\delta} \Gamma_{\chi}^{\delta} - 2 a_1 \partial^{\alpha} \Gamma_{\alpha}^{\beta} \partial_{\delta} \Gamma_{\chi}^{\delta} + \\
& 2 a_1 \partial^{\alpha} \Gamma_{\beta\alpha}^{\beta} \partial_{\delta} \Gamma_{\chi}^{\delta\alpha} + 4 a_1 \partial^{\alpha} \Gamma_{\chi}^{\beta} \partial_{\delta} \Gamma_{\beta}^{\chi\delta} - \\
& 2 a_1 \partial_{\beta} \Gamma_{\alpha}^{\beta} \partial_{\delta} \Gamma_{\chi}^{\chi\delta} + 4 a_1 \partial_{\beta} \Gamma_{\alpha}^{\beta} \partial_{\delta} \Gamma_{\chi}^{\chi\delta} - \\
& 2 a_1 \partial_{\beta} \Gamma_{\alpha}^{\alpha\beta} \partial_{\delta} \Gamma_{\chi}^{\chi\delta} + 2 a_1 \partial_{\alpha} \Gamma_{\chi\beta\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + \\
& 4 a_1 \partial_{\alpha} \Gamma_{\beta\delta\chi}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + 4 a_1 \partial_{\alpha} \Gamma_{\chi\beta\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + \\
& 2 a_1 \partial_{\alpha} \Gamma_{\chi\delta\beta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + 4 a_1 \partial_{\alpha} \Gamma_{\delta\beta\chi}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + \\
& 4 a_1 \partial_{\alpha} \Gamma_{\delta\chi\beta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\beta} \Gamma_{\alpha\chi\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - \\
& 2 a_1 \partial_{\beta} \Gamma_{\alpha\delta\chi}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\beta} \Gamma_{\chi\delta\alpha}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - \\
& 2 a_1 \partial_{\chi} \Gamma_{\alpha\beta\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\chi} \Gamma_{\beta\alpha\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + \\
& 4 a_1 \partial_{\chi} \Gamma_{\beta\delta\alpha}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 4 a_1 \partial_{\alpha} \Gamma_{\beta\chi\delta}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 4 a_1 \partial_{\delta} \Gamma_{\alpha\chi\beta}^{\delta} \\
& \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\delta} \Gamma_{\beta\alpha\chi}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - 2 a_1 \partial_{\delta} \Gamma_{\beta\chi\alpha}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} - \\
& 2 a_1 \partial_{\delta} \Gamma_{\chi\beta\alpha}^{\delta} \partial^{\alpha} \Gamma^{\alpha\beta\chi} + 2 a_1 \partial_{\beta} \Gamma_{\alpha\alpha}^{\beta} \partial^{\alpha} \Gamma_{\chi}^{\chi\alpha} + \\
& 2 a_1 \partial_{\beta} \Gamma_{\alpha\alpha}^{\beta} \partial^{\alpha} \Gamma_{\chi}^{\chi\alpha} ) [t, x, y, z] dz dy dx dt
\end{aligned}$$

	$\Gamma_{1^+ \alpha \beta}^{\#1}$	$\Gamma_{1^+ \alpha \beta}^{\#2}$	$\Gamma_{1^+ \alpha \beta}^{\#3}$	$\Gamma_{1^- \alpha}^{\#1}$	$\Gamma_{1^- \alpha}^{\#2}$	$\Gamma_{1^- \alpha}^{\#3}$	$\Gamma_{1^- \alpha}^{\#4}$	$\Gamma_{1^- \alpha}^{\#5}$	$\Gamma_{1^- \alpha}^{\#6}$	$\hbar_{1^- \alpha}^{\#1}$
$\Gamma_{1^+}^{\#1} + \alpha \beta$	$\frac{1}{4}(-a_0 - 15 a_1 k^2)$	$-\frac{a_0}{2\sqrt{2}}$	$5 a_1 k^2$	0	0	0	0	0	0	0
$\Gamma_{1^+}^{\#2} + \alpha \beta$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0	0	0	0	0
$\Gamma_{1^+}^{\#3} + \alpha \beta$	$5 a_1 k^2$	0	$\frac{1}{4}(a_0 - 29 a_1 k^2)$	0	0	0	0	0	0	0
$\Gamma_{1^-}^{\#1} + \alpha$	0	0	0	$\frac{1}{4}(-a_0 - 3 a_1 k^2)$	$-\frac{a_0}{2\sqrt{2}}$	$\frac{5}{2}\sqrt{3} a_1 k^2$	$-\frac{5}{2}\sqrt{\frac{5}{3}} a_1 k^2$	$5\sqrt{\frac{3}{2}} a_1 k^2$	$-\frac{5 a_1 k^2}{\sqrt{3}}$	$-\frac{i a_0 k}{4\sqrt{2}}$
$\Gamma_{1^-}^{\#2} + \alpha$	0	0	0	$-\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0	0
$\Gamma_{1^-}^{\#3} + \alpha$	0	0	0	$\frac{5}{2}\sqrt{3} a_1 k^2$	0	$-\frac{a_0}{3}$	$\frac{1}{6}\sqrt{5}(a_0 - 8 a_1 k^2)$	$-\frac{a_0}{6\sqrt{2}}$	$\frac{1}{6}(-a_0 + 20 a_1 k^2)$	$\frac{i a_0 k}{4\sqrt{6}}$
$\Gamma_{1^-}^{\#4} + \alpha$	0	0	0	$-\frac{5}{2}\sqrt{\frac{5}{3}} a_1 k^2$	0	$\frac{1}{6}\sqrt{5}(a_0 - 8 a_1 k^2)$	$\frac{1}{3}(a_0 + 7 a_1 k^2)$	$-\frac{1}{6}\sqrt{\frac{5}{2}}(a_0 + 16 a_1 k^2)$	$-\frac{1}{6}\sqrt{5}(a_0 - 5 a_1 k^2)$	$-\frac{1}{4}i\sqrt{\frac{5}{6}} a_0 k$
$\Gamma_{1^-}^{\#5} + \alpha$	0	0	0	$5\sqrt{\frac{3}{2}} a_1 k^2$	0	$-\frac{a_0}{6\sqrt{2}}$	$-\frac{1}{6}\sqrt{\frac{5}{2}}(a_0 + 16 a_1 k^2)$	$\frac{a_0}{3}$	$\frac{a_0 + 40 a_1 k^2}{6\sqrt{2}}$	$\frac{i a_0 k}{4\sqrt{3}}$
$\Gamma_{1^-}^{\#6} + \alpha$	0	0	0	$-\frac{5 a_1 k^2}{\sqrt{3}}$	0	$\frac{1}{6}(-a_0 + 20 a_1 k^2)$	$-\frac{1}{6}\sqrt{5}(a_0 - 5 a_1 k^2)$	$\frac{a_0 + 40 a_1 k^2}{6\sqrt{2}}$	$\frac{5}{12}(a_0 - 17 a_1 k^2)$	$\frac{i a_0 k}{4\sqrt{6}}$
$\hbar_{1^-}^{\#1} + \alpha$	0	0	0	$\frac{i a_0 k}{4\sqrt{2}}$	0	$-\frac{i a_0 k}{4\sqrt{6}}$	$\frac{1}{4}i\sqrt{\frac{5}{6}} a_0 k$	$-\frac{i a_0 k}{4\sqrt{3}}$	$-\frac{i a_0 k}{4\sqrt{6}}$	0

	$\Delta_0^{#1}+$	$\Delta_0^{#2}+$	$\Delta_0^{#3}+$	$\Delta_0^{#4}+$	$\mathcal{T}_0^{#1}+$	$\mathcal{T}_0^{#2}+$	$\Delta_0^{#1}-$
$\Delta_0^{#1}+$	0	$\frac{4\sqrt{6}}{16a_0+3a_0k^2}$	$-\frac{4\sqrt{\frac{2}{3}}}{16a_0+3a_0k^2}$	$-\frac{8}{\sqrt{3}(16a_0+3a_0k^2)}$	$-\frac{2i\sqrt{2}}{a_0k}$	$-\frac{2i\sqrt{6}k}{16a_0+3a_0k^2}$	0
$\Delta_0^{#2}+$	$\frac{4\sqrt{6}}{16a_0+3a_0k^2}$	$\frac{48(3a_0+197a_1k^2)}{a_0^2(16+3k^2)^2}$	$\frac{16(19a_0k^2+3a_0+197a_1k^2)}{a_0^2(16+3k^2)^2}$	$\frac{8\sqrt{2}(10a_0+(3a_0-394a_1)k^2)}{a_0^2(16+3k^2)^2}$	$\frac{8i\sqrt{3}(a_0-65a_1k^2)}{a_0^2k(16+3k^2)}$	$\frac{24ik(3a_0+197a_1k^2)}{a_0^2(16+3k^2)^2}$	0
$\Delta_0^{#3}+$	$-\frac{4\sqrt{\frac{2}{3}}}{16a_0+3a_0k^2}$	$\frac{16(19a_0+(3a_0+197a_1)k^2)}{a_0^2(16+3k^2)^2}$	$-\frac{16(35a_0+(6a_0+197a_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{8\sqrt{2}(22a_0+(3a_0+394a_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{8i(a_0-65a_1k^2)}{\sqrt{3}a_0^2k(16+3k^2)}$	$-\frac{8ik(19a_0+(3a_0+197a_1)k^2)}{a_0^2(16+3k^2)^2}$	0
$\Delta_0^{#4}+$	$-\frac{8}{\sqrt{3}(16a_0+3a_0k^2)}$	$-\frac{8\sqrt{2}(10a_0+(3a_0-394a_1)k^2)}{a_0^2(16+3k^2)^2}$	$-\frac{8\sqrt{2}(22a_0+(3a_0+394a_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{32(13a_0+(3a_0-197a_1)k^2)}{3a_0^2(16+3k^2)^2}$	$\frac{8i\sqrt{\frac{2}{3}}(a_0-65a_1k^2)}{a_0^2k(16+3k^2)}$	$\frac{4i\sqrt{2}k(10a_0+(3a_0-394a_1)k^2)}{a_0^2(16+3k^2)^2}$	0
$\mathcal{T}_0^{#1}+$	$\frac{2i\sqrt{2}}{a_0k}$	$\frac{8i\sqrt{3}(a_0-65a_1k^2)}{a_0^2k(16+3k^2)}$	$-\frac{8i(a_0-65a_1k^2)}{\sqrt{3}a_0^2k(16+3k^2)}$	$-\frac{8i\sqrt{\frac{2}{3}}(a_0-65a_1k^2)}{a_0^2k(16+3k^2)}$	$\frac{4(a_0-25a_1k^2)}{a_0^2k^2}$	$\frac{4\sqrt{3}(a_0-65a_1k^2)}{a_0^2(16+3k^2)}$	0
$\mathcal{T}_0^{#2}+$	$\frac{2i\sqrt{6}k}{16a_0+3a_0k^2}$	$-\frac{24ik(3a_0+197a_1k^2)}{a_0^2(16+3k^2)^2}$	$\frac{8ik(19a_0+(3a_0+197a_1)k^2)}{a_0^2(16+3k^2)^2}$	$-\frac{4i\sqrt{2}k(10a_0+(3a_0-394a_1)k^2)}{a_0^2(16+3k^2)^2}$	$\frac{4\sqrt{3}(a_0-65a_1k^2)}{a_0^2(16+3k^2)}$	$-\frac{12k^2(3a_0+197a_1k^2)}{a_0^2(16+3k^2)^2}$	0
$\Delta_0^{#1}-$	0	0	0	0	0	0	$-\frac{2}{a_0a_1k^2}$

	$\Delta_{2+}^{\#1} \alpha\beta$	$\Delta_{2+}^{\#2} \alpha\beta$	$\Delta_{2+}^{\#3} \alpha\beta$	$\mathcal{T}_{2+}^{\#1} \alpha\beta$	$\Delta_{2-}^{\#1} \alpha\beta\chi$	$\Delta_{2-}^{\#2} \alpha\beta\chi$
$\Delta_{2+}^{\#1} \alpha\beta$	0	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$\frac{4}{\sqrt{3}a_0}$	$\frac{4i\sqrt{2}}{a_0k}$	0	0
$\Delta_{2+}^{\#2} \alpha\beta$	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$-\frac{8(a_0+13a_1k^2)}{3a_0^2}$	$-\frac{2\sqrt{2}(a_0+52a_1k^2)}{3a_0^2}$	$-\frac{4i(a_0+31a_1k^2)}{\sqrt{3}a_0^2k}$	0	0
$\Delta_{2+}^{\#3} \alpha\beta$	$\frac{4}{\sqrt{3}a_0}$	$-\frac{2\sqrt{2}(a_0+52a_1k^2)}{3a_0^2}$	$\frac{8(a_0-26a_1k^2)}{3a_0^2}$	$-\frac{4i\sqrt{\frac{2}{3}}(a_0+31a_1k^2)}{a_0^2k}$	0	0
$\mathcal{T}_{2+}^{\#1} \alpha\beta$	$-\frac{4i\sqrt{2}}{a_0k}$	$\frac{4i(a_0+31a_1k^2)}{\sqrt{3}a_0^2k}$	$\frac{4i\sqrt{\frac{2}{3}}(a_0+31a_1k^2)}{a_0^2k}$	$-\frac{8(a_0+11a_1k^2)}{a_0^2k^2}$	0	0
$\Delta_{2-}^{\#1} \alpha\beta\chi$	0	0	0	0	$\frac{4}{a_0a_1k^2}$	0
$\Delta_{2-}^{\#2} \alpha\beta\chi$	0	0	0	0	0	$\frac{4}{a_0-5a_1k^2}$

	$\Gamma_{2+\alpha\beta}^{\#1}$	$\Gamma_{2+\alpha\beta}^{\#2}$	$\Gamma_{2+\alpha\beta}^{\#3}$	$h_{2+\alpha\beta}^{\#1}$	$\Gamma_{2-\alpha\beta\chi}^{\#1}$	$\Gamma_{2-\alpha\beta\chi}^{\#2}$
$\Gamma_{2+\alpha\beta}^{\#1}$	$\frac{1}{4}(a_0 + 11a_1k^2)$	$-5\sqrt{\frac{2}{3}}a_1k^2$	$\frac{5a_1k^2}{\sqrt{3}}$	$\frac{ia_0k}{4\sqrt{2}}$	0	0
$\Gamma_{2+\alpha\beta}^{\#2}$	$-5\sqrt{\frac{2}{3}}a_1k^2$	$\frac{1}{6}(-3a_0 + a_1k^2)$	$-\frac{a_1k^2}{6\sqrt{2}}$	$\frac{ia_0k}{4\sqrt{3}}$	0	0
$\Gamma_{2+\alpha\beta}^{\#3}$	$\frac{5a_1k^2}{\sqrt{3}}$	$-\frac{a_1k^2}{6\sqrt{2}}$	$\frac{1}{12}(3a_0 + a_1k^2)$	$-\frac{ia_0k}{4\sqrt{6}}$	0	0
$h_{2+\alpha\beta}^{\#1}$	$-\frac{ia_0k}{4\sqrt{2}}$	$-\frac{ia_0k}{4\sqrt{3}}$	$\frac{ia_0k}{4\sqrt{6}}$	0	0	0
$\Gamma_{2-\alpha\beta\chi}^{\#1}$	0	0	0	0	$\frac{1}{4}(a_0 - a_1k^2)$	0
$\Gamma_{2-\alpha\beta\chi}^{\#2}$	0	0	0	0	0	$\frac{1}{4}(a_0 - 5a_1k^2)$

Source constraints	Fundamental fields	Multiplicities
SO(3) irreps		
$2\mathcal{T}_{0+}^{\#2} - i k \Delta_{0+}^{\#2} == 0$	$2\partial_{\beta}\partial_{\alpha}\mathcal{T}^{\alpha\beta} == \partial_{\chi}\partial_{\beta}\partial_{\alpha}\Delta^{\alpha\beta\chi}$	1
$\Delta_{0+}^{\#3} + 2\Delta_{0+}^{\#4} + 3\Delta_{0+}^{\#2} == 0$	$\partial_{\alpha}\Delta^{\alpha\beta}_{\beta} == 0$	1
$6\mathcal{T}_1^{\#1\alpha} - i k (3\Delta_1^{\#2\alpha} - \Delta_1^{\#5\alpha} + \Delta_1^{\#3\alpha}) == 0$	$2\partial_{\chi}\partial_{\beta}\partial^{\alpha}\mathcal{T}^{\beta\chi} + \partial_{\sigma}\partial^{\delta}\partial_{\chi}\partial_{\beta}\Delta^{\beta\alpha\chi} == 2\partial_{\chi}\partial^{\alpha}\partial_{\beta}\mathcal{T}^{\alpha\beta} + \partial_{\sigma}\partial_{\chi}\partial_{\beta}\partial^{\alpha}\Delta^{\beta\chi\delta}$	3
$2\Delta_1^{\#6\alpha} + \Delta_1^{\#4\alpha} + 2\Delta_1^{\#5\alpha} + \Delta_1^{\#3\alpha} == 0$	$\partial_{\beta}\partial^{\alpha}\Delta^{\beta\chi}_{\chi} == \partial_{\chi}\partial^{\alpha}\Delta^{\alpha\beta}_{\beta}$	3
Total constraints/gauge generators:		8

	$\Gamma_{0+}^{\#1}$	$\Gamma_{0+}^{\#2}$	$\Gamma_{0+}^{\#3}$	$\Gamma_{0+}^{\#4}$	$h_{0+}^{\#1}$	$h_{0+}^{\#2}$	$\Gamma_{0-}^{\#1}$
$\Gamma_{0+}^{\#1} \dagger$	$\frac{1}{2} (-a_0 + 25 a_1 k^2)$	0	$10 \sqrt{\frac{2}{3}} a_1 k^2$	$-\frac{10 a_1 k^2}{\sqrt{3}}$	$-\frac{i a_0 k}{2 \sqrt{2}}$	0	0
$\Gamma_{0+}^{\#2} \dagger$	0	0	$\frac{a_0}{2}$	$-\frac{a_0}{2 \sqrt{2}}$	0	0	0
$\Gamma_{0+}^{\#3} \dagger$	$10 \sqrt{\frac{2}{3}} a_1 k^2$	$\frac{a_0}{2}$	$\frac{23 a_1 k^2}{3}$	$-\frac{3 a_0 + 46 a_1 k^2}{6 \sqrt{2}}$	$\frac{i a_0 k}{4 \sqrt{3}}$	$-\frac{1}{4} i a_0 k$	0
$\Gamma_{0+}^{\#4} \dagger$	$-\frac{10 a_1 k^2}{\sqrt{3}}$	$-\frac{a_0}{2 \sqrt{2}}$	$-\frac{3 a_0 + 46 a_1 k^2}{6 \sqrt{2}}$	$\frac{1}{6} (3 a_0 + 23 a_1 k^2)$	$-\frac{i a_0 k}{4 \sqrt{6}}$	$\frac{i a_0 k}{4 \sqrt{2}}$	0
$h_{0+}^{\#1} \dagger$	$\frac{i a_0 k}{2 \sqrt{2}}$	0	$-\frac{i a_0 k}{4 \sqrt{3}}$	$\frac{i a_0 k}{4 \sqrt{6}}$	0	0	0
$h_{0+}^{\#2} \dagger$	0	0	$\frac{i a_0 k}{4}$	$-\frac{i a_0 k}{4 \sqrt{2}}$	0	0	0
$\Gamma_{0-}^{\#1} \dagger$	0	0	0	0	0	0	$\frac{1}{2} (-a_0 + a_1 k^2)$

$$\Delta_{3^{-}}^{\#1} \alpha \beta \chi - \frac{2}{a_0 + 7a_1 k^2} \Delta_{3^{-}}^{\#1} + \alpha \beta \chi$$

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** MassiveAnalysisOfSector... Null
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## Unitarity conditions