$\Gamma^{\#1}_{1^+}{}^{\alpha\beta}$	$\Gamma^{\#2}_{1^+}{}^{\alpha\beta}$	$\Gamma^{\#3}_{1^+}{}^{\alpha\beta}$	$\Gamma^{\#1}_{1^-}{}^{\alpha}$	$\Gamma^{\#2}_{1^-}{}^{\alpha}$	$\Gamma^{\#3}_{1^-}{}^{\alpha}$	$\Gamma^{\#4}_{1^-}{}^{\alpha}$	$\Gamma^{\#5}_{1^-}{}^{\alpha}$	$\Gamma^{\#6}_{1^-}{}^{\alpha}$	$h^{\#1}_{1^-}{}^{\alpha}$
$-\frac{a_0}{4}$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0	0	0	0
$-\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0	0	0	0	0
0	0	$\frac{a_0}{4}$	0	0	0	0	0	0	0
0	0	0	$-\frac{a_0}{4}$	$\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0
0	0	0	$\frac{a_0}{2\sqrt{2}}$	0	0	0	0	0	0
0	0	0	0	$-\frac{a_0}{3}$	$\frac{\sqrt{5}\,a_0}{6}$	0	0	0	0
0	0	0	0	$\frac{\sqrt{5}\,a_0}{6}$	$\frac{a_0}{3}$	$\frac{\sqrt{5}\,a_0}{6}$	0	0	0
0	0	0	0	0	$\frac{\sqrt{5}\,a_0}{6}$	$\frac{a_0}{3}$	$-\frac{a_0}{6\sqrt{2}}$	0	0
0	0	0	0	0	0	$\frac{\sqrt{5}\,a_0}{6}$	$-\frac{a_0}{6\sqrt{2}}$	$-\frac{a_0}{6}$	0
0	0	0	0	0	0	0	$-\frac{a_0}{6}$	$\frac{a_0}{6\sqrt{2}}$	0
0	0	0	0	0	0	0	0	$\frac{a_0}{6\sqrt{2}}$	0
0	0	0	0	0	0	0	0	0	0

$\Gamma^{\#1}_{2^+}{}^{\alpha\beta}$	$\Gamma^{\#2}_{2^+}{}^{\alpha\beta}$	$\Gamma^{\#3}_{2^+}{}^{\alpha\beta}$	$h^{\#1}_{2^+}{}^{\alpha\beta}$	$\Gamma^{\#1}_{2^-}{}^{\alpha\beta\chi}$	$\Gamma^{\#2}_{2^-}{}^{\alpha\beta\chi}$
$\frac{a_0}{4}$	0	0	$\frac{i a_0 k}{4\sqrt{2}}$	0	0
0	$-\frac{a_0}{2}$	0	$\frac{i a_0 k}{4\sqrt{3}}$	0	0
0	0	$\frac{a_0}{4}$	$-\frac{i a_0 k}{4\sqrt{6}}$	0	0
$-\frac{i a_0 k}{4\sqrt{2}}$	$-\frac{i a_0 k}{4\sqrt{3}}$	$\frac{i a_0 k}{4\sqrt{6}}$	0	0	0
0	0	0	0	$\frac{a_0}{4}$	0
0	0	0	0	0	$\frac{a_0}{4}$

$\Gamma^{\#1}_{2^+}{}^{\alpha\beta}+\alpha\beta$	$\Gamma^{\#2}_{2^+}{}^{\alpha\beta}+\alpha\beta$	$\Gamma^{\#3}_{2^+}{}^{\alpha\beta}+\alpha\beta$	$h^{\#1}_{2^+}{}^{\alpha\beta}+\alpha\beta$	$\Gamma^{\#1}_{2^-}{}^{\alpha\beta\chi}+\alpha\beta\chi$	$\Gamma^{\#2}_{2^-}{}^{\alpha\beta\chi}+\alpha\beta\chi$
$\frac{a_0}{4}$	0	0	$\frac{i a_0 k}{4\sqrt{2}}$	0	0
0	$-\frac{a_0}{2}$	0	$\frac{i a_0 k}{4\sqrt{3}}$	0	0
0	0	$\frac{a_0}{4}$	$-\frac{i a_0 k}{4\sqrt{6}}$	0	0
$-\frac{i a_0 k}{4\sqrt{2}}$	$-\frac{i a_0 k}{4\sqrt{3}}$	$\frac{i a_0 k}{4\sqrt{6}}$	0	0	0
0	0	0	0	$\frac{a_0}{4}$	0
0	0	0	0	0	$\frac{a_0}{4}$

$\Delta^{\#1}_{0^+}$	$\Delta^{\#2}_{0^+}$	$\Delta^{\#3}_{0^+}$	$\Delta^{\#4}_{0^+}$	$\mathcal{T}^{\#1}_{0^+}$	$\mathcal{T}^{\#2}_{0^+}$	$\Delta^{\#1}_{0^-}$
0	$\frac{4\sqrt{6}}{16a_0+3a_0k^2}$	$-\frac{4\sqrt{2}}{16a_0+3a_0k^2}$	$-\frac{8}{\sqrt{3}\,(16a_0+3a_0k^2)}$	$-\frac{2i\sqrt{2}}{a_0k}$	$-\frac{2i\sqrt{6}\,k}{16a_0+3a_0k^2}$	$-\frac{2}{a_0}$
$\frac{4\sqrt{6}}{16a_0+3a_0k^2}$	$-\frac{144}{a_0(16+3k^2)^2}$	$\frac{16(19+3k^2)}{a_0(16+3k^2)^2}$	$-\frac{8\sqrt{2}\,(10+3k^2)}{3a_0(16+3k^2)^2}$	$-\frac{8i\sqrt{3}}{16a_0+3a_0k^2}$	$\frac{72ik}{a_0(16+3k^2)^2}$	0
$-\frac{4\sqrt{2}\sqrt{3}}{16a_0+3a_0k^2}$	$\frac{16(19+3k^2)}{a_0(16+3k^2)^2}$	$-\frac{16(35+6k^2)}{3a_0(16+3k^2)^2}$	$\frac{8\sqrt{2}\,(22+3k^2)}{3a_0(16+3k^2)^2}$	$\frac{8i\sqrt{2}}{16a_0+3a_0k^2}$	$-\frac{36k^2}{a_0(16+3k^2)^2}$	0
$\frac{8}{\sqrt{3}\,(16a_0+3a_0k^2)}$	$-\frac{8\sqrt{2}\,(10+3k^2)}{a_0(16+3k^2)^2}$	$\frac{8\sqrt{2}\,(22+3k^2)}{3a_0(16+3k^2)^2}$	$-\frac{32(13+3k^2)}{3a_0(16+3k^2)^2}$	$-\frac{8i\sqrt{3}}{16a_0+3a_0k^2}$	$\frac{4\sqrt{3}}{16a_0+3a_0k^2}$	0
$-\frac{2i\sqrt{2}}{a_0k}$	$\frac{72ik}{a_0(16+3k^2)^2}$	$-\frac{8ik(19+3k^2)}{a_0(16+3k^2)^2}$	$\frac{4i\sqrt{2}\,k(10+3k^2)}{a_0(16+3k^2)^2}$	$\frac{4}{a_0k^2}$	$-\frac{4\sqrt{3}}{16a_0+3a_0k^2}$	0
$-\frac{2i\sqrt{6}\,k}{16a_0+3a_0k^2}$	$-\frac{36k^2}{a_0(16+3k^2)^2}$	$\frac{4\sqrt{3}}{16a_0+3a_0k^2}$	$\frac{4i\sqrt{2}\,k(10+3k^2)}{a_0(16+3k^2)^2}$	$\frac{8i\sqrt{3}}{16a_0+3a_0k^2}$	$\frac{4}{a_0k^2}$	0
0	0	0	0	0	0	$\frac{2}{a_0}$

$\Delta^{\#1}_{1^+}{}^{\alpha\beta}$	$\Delta^{\#2}_{1^+}{}^{\alpha\beta}$	$\Delta^{\#3}_{1^+}{}^{\alpha\beta}$	$\Delta^{\#1}_{1^-}{}^{\alpha}$	$\Delta^{\#2}_{1^-}{}^{\alpha}$	$\Delta^{\#3}_{1^-}{}^{\alpha}$	$\Delta^{\#4}_{1^-}{}^{\alpha}$	$\Delta^{\#5}_{1^-}{}^{\alpha}$	$\Delta^{\#6}_{1^-}{}^{\alpha}$	$\mathcal{T}^{\#1}_{1^-}{}^{\alpha}$
$-\frac{2\sqrt{2}}{a_0}$	0	0	0	0	0	0	0	0	0
$\frac{2}{a_0}$	0	0	0	0	0	0	0	0	0
$\frac{4}{a_0}$	0	0	0	0	0	0	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	$\frac{\sqrt{2}\,(4+k^2)}{a_0(2+k^2)}$	$-\frac{2k^2}{\sqrt{3}\,a_0(2+k^2)}$	0	$\frac{\sqrt{\frac{2}{3}}\,k^2}{a_0(2+k^2)}$	$-\frac{k^2}{\sqrt{6}\,a_0(2+k^2)}$	$-\frac{ik(4+k^2)}{a_0(2+k^2)^2}$
0	$\frac{(4+k^2)^2}{a_0(2+k^2)^2}$	$\frac{k^2(-2+k^2)}{2\sqrt{6}\,a_0(2+k^2)^2}$	0	$\frac{(4+k^2)^2}{a_0(2+k^2)^2}$	$\frac{k^2(-2+k^2)}{2\sqrt{6}\,a_0(2+k^2)^2}$	$-\frac{\sqrt{\frac{5}{6}}\,k^2}{4a_0+2a_0k^2}$	$\frac{k^2(5+2k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$	$\frac{k^2}{\sqrt{6}\,(2a_0+a_0k^2)}$	$\frac{ik(4+k^2)}{a_0(2+k^2)^2}$
0	$\frac{\sqrt{2}\,(4+k^2)}{a_0(2+k^2)}$	$-\frac{2k^2}{\sqrt{3}\,(2a_0+a_0k^2)}$	0	0	0	$-\frac{\sqrt{\frac{5}{6}}\,k^2}{4a_0+2a_0k^2}$	$\frac{\sqrt{\frac{2}{3}}\,k^2}{2a_0+a_0k^2}$	0	$\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	$\frac{(4+k^2)^2}{a_0(2+k^2)^2}$	$\frac{k^2(-2+k^2)}{2\sqrt{6}\,a_0(2+k^2)^2}$	0	$\frac{(4+k^2)^2}{a_0(2+k^2)^2}$	$\frac{k^2(-2+k^2)}{2\sqrt{6}\,a_0(2+k^2)^2}$	$\frac{\sqrt{5}\,(10+3k^2)}{12a_0(2+k^2)}$	$\frac{k^2(5+2k^2)}{3\sqrt{2}\,a_0(2+k^2)^2}$	$\frac{ik(6+5k^2)}{\sqrt{6}\,a_0(2+k^2)^2}$	$\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{1}{12a_0}$	$\frac{\sqrt{\frac{2}{3}}\,k^2}{2a_0+a_0k^2}$	$\frac{i\sqrt{\frac{2}{3}}\,k}{a_0(2+k^2)}$	$\frac{2k^2}{a_0(2+k^2)^2}$
0	0	0	0	0	0	$-\frac{\sqrt{\frac{5}{6}}\,k^2}{4a_0+2a_0k^2}$	$\frac{\sqrt{\frac{2}{3}}\,k^2}{2a_0+a_0k^2}$	$-\frac{i\sqrt{\frac{2}{3}}\,k}{a_0(2+k^2)}$	$\frac{2ik^2}{a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{\sqrt{5}\,(10+3k^2)}{12a_0(2+k^2)}$	$\frac{\sqrt{\frac{2}{3}}\,k^2}{3\sqrt{2}\,a_0(2+k^2)^2}$	$\frac{i\sqrt{\frac{5}{6}}\,k}{a_0(2+k^2)}$	$\frac{2ik^2}{a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{1}{12a_0}$	$\frac{\sqrt{\frac{5}{2}}}{6a_0+3a_0k^2}$	$-\frac{\sqrt{\frac{5}{2}}}{6a_0+3a_0k^2}$	$\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{\sqrt{5}\,(10+3k^2)}{12a_0(2+k^2)}$	$\frac{-2+k^2}{3\sqrt{2}\,a_0(2+k^2)^2}$	$\frac{\sqrt{2}\,(7+3k^2)}{3a_0(2+k^2)}$	$\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{1}{12a_0}$	$\frac{2(17+14k^2+3k^4)}{3a_0(2+k^2)^2}$	$-\frac{\sqrt{2}\,(7+3k^2)}{3a_0(2+k^2)}$	$\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$-\frac{\sqrt{5}}{6a_0}$	$\frac{\sqrt{\frac{2}{3}}\,k}{2a_0+a_0k^2}$	$\frac{5}{3a_0}$	$-\frac{i\sqrt{\frac{2}{3}}\,k}{a_0(2+k^2)}$
0	0	0	0	0	0	$-\frac{\sqrt{5}}{6a_0}$	$\frac{i\sqrt{\frac{5}{6}}\,k}{2a_0+a_0k^2}$	$\frac{i\sqrt{\frac{2}{3}}\,k}{2a_0+a_0k^2}$	$\frac{2k^2}{a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{1}{12a_0}$	$-\frac{\sqrt{\frac{5}{2}}}{6a_0+3a_0k^2}$	$\frac{\sqrt{\frac{5}{2}}}{6a_0+3a_0k^2}$	$-\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{\sqrt{5}\,(10+3k^2)}{12a_0(2+k^2)}$	$\frac{-2+k^2}{3\sqrt{2}\,a_0(2+k^2)^2}$	$\frac{\sqrt{2}\,(7+3k^2)}{3a_0(2+k^2)}$	$-\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$\frac{1}{12a_0}$	$\frac{2(17+14k^2+3k^4)}{3a_0(2+k^2)^2}$	$-\frac{\sqrt{2}\,(7+3k^2)}{3a_0(2+k^2)}$	$-\frac{2ik(3+k^2)}{\sqrt{3}\,a_0(2+k^2)^2}$
0	0	0	0	0	0	$-\frac{\sqrt{5}}{6a_0}$	$\frac{\sqrt{\frac{2}{3}}\,k}{2a_0+a_0k^2}$	$\frac{5}{3a_0}$	$\frac{i\sqrt{\frac{2}{3}}\,k}{a_0(2+k^2)}$
0	0	0	0	0	0	$-\frac{\sqrt{5}}{6a_0}$	$\frac{i\sqrt{\frac{5}{6}}\,k}{2a_0+a_0k^2}$	$\frac{i\sqrt{\frac{2}{3}}\,k}{2a_0+a_0k^2}$	$\frac{2k^2}{a_0(2+k^2)^2}$

$\Delta^{\#1}_{3^-}{}^{\alpha\beta\chi}$	
$\Delta^{\#1}_{3^-}\dagger^{\alpha\beta\chi}$	$-\frac{2}{a_0}$

$\Gamma^{\#1}_{3^-}{}^{\alpha\beta\chi}$	
$\Gamma^{\#1}_{3^-}\dagger^{\alpha\beta\chi}$	$-\frac{a_0}{2}$

	$\Delta^{\#1}_{2^+}{}^{\alpha\beta}$	$\Delta^{\#2}_{2^+}{}^{\alpha\beta}$	$\Delta^{\#3}_{2^+}{}^{\alpha\beta}$	$\mathcal{T}^{\#1}_{2^+}{}^{\alpha\beta}$	$\Delta^{\#1}_{2^-}{}^{\alpha\beta\chi}$	$\Delta^{\#2}_{2^-}{}^{\alpha\beta\chi}$
$\Delta^{\#1}_{2^+}\dagger^{\alpha\beta}$	0	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$\frac{4}{\sqrt{3}\,a_0}$	$\frac{4i\sqrt{2}}{a_0k}$	0	0
$\Delta^{\#2}_{2^+}\dagger^{\alpha\beta}$	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$-\frac{8}{3a_0}$	$-\frac{2\sqrt{2}}{3a_0}$	$-\frac{4i}{\sqrt{3}\,a_0k}$	0	0
$\Delta^{\#3}_{2^+}\dagger^{\alpha\beta}$	$\frac{4}{\sqrt{3}\,a_0}$	$-\frac{2\sqrt{2}}{3a_0}$	$\frac{8}{3a_0}$	$-\frac{4i\sqrt{\frac{2}{3}}}{a_0k}$	0	0
$\mathcal{T}^{\#1}_{2^+}\dagger^{\alpha\beta}$	$-\frac{4i\sqrt{2}}{a_0k}$	$\frac{4i}{\sqrt{3}\,a_0k}$	$\frac{4i\sqrt{\frac{2}{3}}}{a_0k}$	$-\frac{8}{a_0k^2}$	0	0
$\Delta^{\#1}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{4}{a_0}$	0
$\Delta^{\#2}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	0	0	0	$\frac{4}{a_0}$

	$\Gamma^{\#1}_{0^+}$	$\Gamma^{\#2}_{0^+}$	$\Gamma^{\#3}_{0^+}$	$\Gamma^{\#4}_{0^+}$	$h^{\#1}_{0^+}$	$h^{\#2}_{0^+}$	$\Gamma^{\#1}_{0^-}$
$\Gamma^{\#1}_{0^+}\dagger$	$-\frac{a_0}{2}$	0	0	0	$-\frac{i a_0 k}{2\sqrt{2}}$	0	0
$\Gamma^{\#2}_{0^+}\dagger$	0	0	$\frac{a_0}{2}$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
$\Gamma^{\#3}_{0^+}\dagger$	0	$\frac{a_0}{2}$	0	$-\frac{a_0}{2\sqrt{2}}$	$\frac{i a_0 k}{4\sqrt{3}}$	$-\frac{1}{4}i\,a_0\,k$	0
$\Gamma^{\#4}_{0^+}\dagger$	0	$-\frac{a_0}{2\sqrt{2}}$	$-\frac{a_0}{2\sqrt{2}}$	$\frac{a_0}{2}$	$-\frac{i a_0 k}{4\sqrt{6}}$	$\frac{i a_0 k}{4\sqrt{2}}$	0
$h^{\#1}_{0^+}\dagger$	$\frac{i a_0 k}{2\sqrt{2}}$	0	$-\frac{i a_0 k}{4\sqrt{3}}$	$\frac{i a_0 k}{4\sqrt{6}}$	0	0	0
$h^{\#2}_{0^+}\dagger$	0	0	$\frac{i a_0 k}{4}$	$-\frac{i a_0 k}{4\sqrt{2}}$	0	0	0
$\Gamma^{\#1}_{0^-}\dagger$	0	0	0	0	0	0	$-\frac{a_0}{2}$

Source constraints

SO(3) irreps	#
$2\,\mathcal{T}^{\#2}_{0^+} - i\,k\,\Delta^{\#2}_{0^+} == 0$	1
$\Delta^{\#3}_{0^+} + 2\,\Delta^{\#4}_{0^+} + 3\,\Delta^{\#2}_{0^+} == 0$	1
$6\,\mathcal{T}^{\#1\,\alpha}_{1^-} - i\,k\,(3\,\Delta^{\#2\,\alpha}_{1^-} - \Delta^{\#5\,\alpha}_{1^-} + \Delta^{\#3\,\alpha}_{1^-}) == 0$	3
$2\,\Delta^{\#6\,\alpha}_{1^-} + \Delta^{\#4\,\alpha}_{1^-} + 2\,\Delta^{\#5\,\alpha}_{1^-} + \Delta^{\#3\,\alpha}_{1^-} == 0$	3
Total #:	8

Lagrangian density

$$-\frac{1}{2}\,a_0\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\beta\chi\alpha} + \frac{1}{2}\,a_0\,\Gamma^{\alpha\ \beta}_{\ \alpha}\,\Gamma^{\chi}_{\ \beta\chi} -$$
$$\frac{1}{4}\,a_0\,h^{\chi}_{\ \chi}\,\partial_\beta\Gamma^{\alpha\ \beta}_{\ \alpha} + \frac{1}{4}\,a_0\,h^{\chi}_{\ \chi}\,\partial_\beta\Gamma^{\alpha\beta}_{\ \ \alpha} -$$
$$\frac{1}{2}\,a_0\,h_{\alpha\chi}\,\partial_\beta\Gamma^{\alpha\beta\chi} + \frac{1}{2}\,a_0\,h_{\beta\chi}\,\partial^{\chi}\Gamma^{\alpha\ \beta}_{\ \alpha}$$

Added source term: $h^{\alpha\beta}\,\mathcal{T}_{\alpha\beta} + \Gamma^{\alpha\beta\chi}\,\Delta_{\alpha\beta\chi}$

Quadratic pole

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

$a_0 < 0$

Unitarity conditions

(No massive particles)