

$\Gamma_{1+}^{\#1} + \alpha\beta$	$\Gamma_{1+}^{\#2} + \alpha\beta$	$\Gamma_{1+}^{\#3} + \alpha\beta$	$\Gamma_{1-}^{\#1} + \alpha$	$\Gamma_{1-}^{\#2} + \alpha$	$\Gamma_{1-}^{\#3} + \alpha$	$\Gamma_{1-}^{\#4} + \alpha$	$\Gamma_{1-}^{\#5} + \alpha$	$\Gamma_{1-}^{\#6} + \alpha$	$h_{1-}^{\#1} + \alpha$
$\frac{-a_0}{4}$	$\frac{-a_0}{2\sqrt{2}}$	0	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
$\Gamma_{1+}^{\#3} + \alpha\beta$	0	$\frac{a_0}{4}$	0	0	0	0	0	0	0
$\Gamma_{1-}^{\#1} + \alpha$	0	0	0	$\frac{-a_0}{4}$	$\frac{-a_0}{2\sqrt{2}}$	0	0	0	$\frac{-ia_0k}{4\sqrt{2}}$
$\Gamma_{1-}^{\#2} + \alpha$	0	0	0	0	$\frac{a_0}{2\sqrt{2}}$	0	0	0	0
$\Gamma_{1-}^{\#3} + \alpha$	0	0	0	0	0	$\frac{-a_0}{3}$	$\frac{\sqrt{5}a_0}{6}$	$\frac{-a_0}{6\sqrt{2}}$	$\frac{ia_0k}{4\sqrt{6}}$
$\Gamma_{1-}^{\#4} + \alpha$	0	0	0	0	$\frac{\sqrt{5}a_0}{6}$	$\frac{a_0}{3}$	$-\frac{1}{6}\sqrt{\frac{5}{2}}a_0$	$-\frac{\sqrt{5}a_0}{6}$	$-\frac{1}{4}i\sqrt{\frac{5}{6}}a_0k$
$\Gamma_{1-}^{\#5} + \alpha$	0	0	0	0	$-\frac{a_0}{6\sqrt{2}}$	$\frac{a_0}{3}$	$\frac{a_0}{6\sqrt{2}}$	$\frac{a_0}{12}$	$\frac{ia_0k}{4\sqrt{3}}$
$\Gamma_{1-}^{\#6} + \alpha$	0	0	0	$\frac{-a_0}{6}$	$-\frac{\sqrt{5}a_0}{6}$	$\frac{a_0}{6\sqrt{2}}$	$\frac{5a_0}{12}$	$\frac{ia_0k}{4\sqrt{6}}$	0
$h_{1-}^{\#1} + \alpha$	0	0	0	$\frac{ia_0k}{4\sqrt{2}}$	0	$\frac{1}{4}i\sqrt{\frac{5}{6}}a_0k$	$-\frac{ia_0k}{4\sqrt{3}}$	$-\frac{ia_0k}{4\sqrt{6}}$	0

$\Gamma_{0+}^{\#1} + \alpha\beta$	$\Gamma_{0+}^{\#2} + \alpha\beta$	$\Gamma_{0+}^{\#3} + \alpha\beta$	$\Gamma_{0+}^{\#4} + \alpha\beta$	$h_{0+}^{\#1} + \alpha\beta$	$h_{0+}^{\#2} + \alpha\beta$	$\Gamma_{0-}^{\#1} + \alpha$
$\frac{-a_0}{2}$	0	0	0	$-\frac{ia_0k}{2\sqrt{2}}$	0	0
$\Gamma_{0+}^{\#2} + \alpha\beta$	0	$\frac{a_0}{2}$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
$\Gamma_{0+}^{\#3} + \alpha\beta$	0	$\frac{a_0}{2}$	$-\frac{a_0}{2\sqrt{2}}$	$\frac{ia_0k}{4\sqrt{3}}$	$-\frac{1}{4}ia_0k$	0
$\Gamma_{0+}^{\#4} + \alpha\beta$	0	$-\frac{a_0}{2\sqrt{2}}$	$\frac{a_0}{2}$	$-\frac{ia_0k}{4\sqrt{6}}$	$\frac{ia_0k}{4\sqrt{2}}$	0
$h_{0+}^{\#1} + \alpha\beta$	$\frac{ia_0k}{2\sqrt{2}}$	0	$-\frac{ia_0k}{4\sqrt{3}}$	$\frac{ia_0k}{4\sqrt{6}}$	0	0
$h_{0+}^{\#2} + \alpha\beta$	0	0	$\frac{ia_0k}{4}$	$-\frac{ia_0k}{4\sqrt{2}}$	0	0
$\Gamma_{0-}^{\#1} + \alpha$	0	0	0	0	0	$-\frac{a_0}{2}$

$\Gamma_{2+}^{\#1} + \alpha\beta$	$\Gamma_{2+}^{\#2} + \alpha\beta$	$\Gamma_{2+}^{\#3} + \alpha\beta$	$h_{2+}^{\#1} + \alpha\beta$	$\Gamma_{2-}^{\#1} + \alpha\beta$	$\Gamma_{2-}^{\#2} + \alpha\beta$
$\frac{a_0}{4}$	0	0	$\frac{ia_0k}{4\sqrt{2}}$	0	0
$\Gamma_{2+}^{\#2} + \alpha\beta$	0	$\frac{-a_0}{2}$	$\frac{ia_0k}{4\sqrt{3}}$	0	0
$\Gamma_{2+}^{\#3} + \alpha\beta$	0	0	$\frac{a_0}{4}$	$-\frac{ia_0k}{4\sqrt{6}}$	0
$h_{2+}^{\#1} + \alpha\beta$	$\frac{-ia_0k}{4\sqrt{2}}$	$-\frac{ia_0k}{4\sqrt{3}}$	0	0	0
$\Gamma_{2-}^{\#1} + \alpha\beta$	0	0	0	$\frac{a_0}{4}$	0
$\Gamma_{2-}^{\#2} + \alpha\beta$	0	0	0	0	$\frac{a_0}{4}$

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

$$\Delta_{3-}^{\#1} + \alpha\beta \left| \begin{array}{c} \Delta_{3-}^{\#1} \alpha\beta\chi \\ -\frac{2}{a_0} \end{array} \right.$$

$$\Gamma_{3-}^{\#1} + \alpha\beta \left| \begin{array}{c} \Gamma_{3-}^{\#1} \alpha\beta\chi \\ -\frac{a_0}{2} \end{array} \right.$$

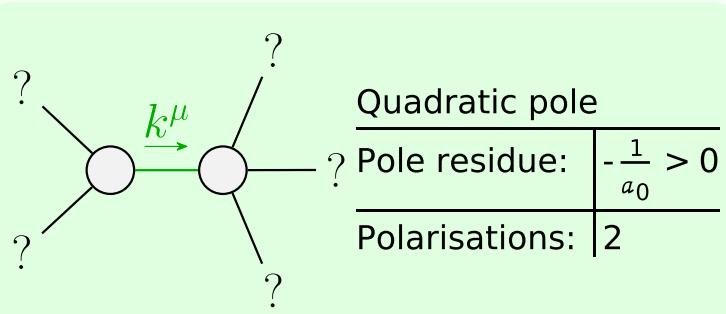
$\Delta_{2+}^{\#1} + \alpha\beta$	$\Delta_{2+}^{\#2} + \alpha\beta$	$\Delta_{2+}^{\#3} + \alpha\beta$	$\mathcal{T}_{2+}^{\#1} + \alpha\beta$	$\Delta_{2-}^{\#1} + \alpha\beta\chi$	$\Delta_{2-}^{\#2} + \alpha\beta\chi$
0	$\frac{2\sqrt{\frac{2}{3}}}{a_0}$	$\frac{4}{\sqrt{3}a_0}$	$\frac{4i\sqrt{2}}{a_0k}$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

$\Delta_{1+}^{\#1} + \alpha\beta$	$\Delta_{1+}^{\#2} + \alpha\beta$	$\Delta_{1+}^{\#3} + \alpha\beta$	$\Delta_{1-}^{\#1} + \alpha$	$\Delta_{1-}^{\#2} + \alpha$	$\Delta_{1-}^{\#3} + \alpha$	$\Delta_{1-}^{\#4} + \alpha$	$\Delta_{1-}^{\#5} + \alpha$	$\Delta_{1-}^{\#6} + \alpha$	$\mathcal{T}_{1-}^{\#1} + \alpha$
0	$\frac{-2\sqrt{2}}{a_0}$	0	0	0	0	0	0	0	0
$\Delta_{1+}^{\#2} + \alpha\beta$	$\frac{-2\sqrt{2}}{a_0}$	0	0	0	0	0	0	0	0
$\Delta_{1+}^{\#3} + \alpha\beta$	0	$\frac{4}{a_0}$	0	0	0	0	0	0	0
$\Delta_{1-}^{\#1} + \alpha$	0	0	0	0	$\frac{\sqrt{2}(4+k^2)}{a_0(2+k^2)}$	$-\frac{2k^2}{\sqrt{3}a_0(2+k^2)}$	$\frac{\sqrt{2}(5+2k^2)}{2a_0(2+k^2)^2}$	$-\frac{ik(4+k^2)}{a_0(2+k^2)^2}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#2} + \alpha$	0	0	0	0	$\frac{(4+k^2)^2}{2a_0(2+k^2)^2}$	$-\frac{k^2(2+2k^2)}{2\sqrt{6}a_0(2+k^2)^2}$	$-\frac{k^2(5+2k^2)}{2a_0(2+k^2)^2}$	$-\frac{ik(4+k^2)}{a_0(2+k^2)^2}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#3} + \alpha$	0	0	0	0	$\frac{k^2(-2+k^2)}{2\sqrt{6}a_0(2+k^2)^2}$	$-\frac{76+52k^2+3k^4}{12a_0(2+k^2)^2}$	$-\frac{1}{6a_0+3a_0k^2}$	$-\frac{ik(6+5k^2)}{\sqrt{6}a_0(2+k^2)^2}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#4} + \alpha$	0	0	0	0	$-\frac{\sqrt{5}k^2}{4a_0+2a_0k^2}$	$\frac{\sqrt{5}(10+3k^2)}{12a_0}$	$-\frac{1}{6a_0+3a_0k^2}$	$-\frac{ik(6+5k^2)}{a_0(2+k^2)}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#5} + \alpha$	0	0	0	0	$\frac{k^2(5+2k^2)}{2a_0(2+k^2)^2}$	$-\frac{76+52k^2+3k^4}{12a_0(2+k^2)^2}$	$-\frac{1}{6a_0+3a_0k^2}$	$-\frac{ik(6+5k^2)}{\sqrt{6}a_0(2+k^2)^2}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\Delta_{1-}^{\#6} + \alpha$	0	0	0	0	$-\frac{1}{\sqrt{6}(2a_0+a_0k^2)}$	$\frac{1}{12a_0}$	$-\frac{1}{6a_0+3a_0k^2}$	$-\frac{ik(6+5k^2)}{a_0(2+k^2)}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$
$\mathcal{T}_{1-}^{\#1} + \alpha$	0	0	0	0	$\frac{ik(4+k^2)}{a_0(2+k^2)^2}$	$-\frac{k^2(2+2k^2)}{2\sqrt{6}a_0(2+k^2)^2}$	$-\frac{k^2(5+2k^2)}{2a_0(2+k^2)^2}$	$-\frac{ik(4+k^2)}{a_0(2+k^2)^2}$	$-\frac{2i\sqrt{2}k}{a_0(2+k^2)}$

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

Lagrangian density
$-\frac{1}{2}a_0\Gamma^{\alpha\beta\chi}\Gamma_{\beta\chi\alpha} + \frac{1}{2}a_0\Gamma_{\alpha}^{\alpha\beta}\Gamma^{\chi}_{\beta\chi}$
$\frac{1}{4}a_0h^{\chi}_{\chi}\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha} + \frac{1}{4}a_0h^{\chi}_{\chi}\partial_{\beta}\Gamma^{\alpha\beta}_{\alpha}$
$\frac{1}{2}a_0h_{\alpha\chi}\partial_{\beta}\Gamma^{\alpha\beta\chi} + \frac{1}{2}a_0h_{\beta\chi}\partial^{\chi}\Gamma^{\alpha\beta}_{\alpha}$
Added source term:
$h^{\alpha\beta}\mathcal{T}_{\alpha\beta} + \Gamma^{\alpha\beta\chi}\Delta_{\alpha\beta\chi}$

(No massive particles)



Unitarity conditions
 $a_0 < 0$