

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

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

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

	$\Delta_{1^{+}}^{\#1} \alpha\beta$	$\Delta_{1^{+}}^{\#2} \alpha\beta$	$\Delta_{1^{+}}^{\#3} \alpha\beta$	$\Delta_{1^{-}}^{\#1} \alpha$	$\Delta_{1^{-}}^{\#2} \alpha$	$\Delta_{1^{-}}^{\#3} \alpha$	$\Delta_{1^{-}}^{\#4} \alpha$	$\Delta_{1^{-}}^{\#5} \alpha$	$\Delta_{1^{-}}^{\#6} \alpha$	$\mathcal{T}_{1^{-}}^{\#1} \alpha$
$\Delta_{1^{+}}^{\#1} \dagger^{\alpha\beta}$	0	$-\frac{2\sqrt{2}}{a_0}$	0	0	0	0	0	0	0	0
$\Delta_{1^{+}}^{\#2} \dagger^{\alpha\beta}$	$-\frac{2\sqrt{2}}{a_0}$	$\frac{2}{a_0}$	0	0	0	0	0	0	0	0
$\Delta_{1^{+}}^{\#3} \dagger^{\alpha\beta}$	0	0	$\frac{4}{a_0}$	0	0	0	0	0	0	0
$\Delta_{1^{-}}^{\#1} \dagger^{\alpha}$	0	0	0	$\frac{2\sqrt{2}}{a_0}$	$\frac{2\sqrt{2}}{a_0}$	0	0	0	0	0
$\Delta_{1^{-}}^{\#2} \dagger^{\alpha}$	0	0	0	$\frac{2\sqrt{2}}{a_0}$	0	$-\frac{19}{12a_0}$	$\frac{5\sqrt{5}}{12a_0}$	$-\frac{1}{6\sqrt{2}a_0}$	$-\frac{1}{6a_0}$	0
$\Delta_{1^{-}}^{\#3} \dagger^{\alpha}$	0	0	0	0	0	$\frac{5\sqrt{5}}{12a_0}$	$\frac{1}{12a_0}$	$-\frac{\sqrt{5}}{6a_0}$	$-\frac{\sqrt{5}}{6a_0}$	0
$\Delta_{1^{-}}^{\#4} \dagger^{\alpha}$	0	0	0	0	0	$-\frac{1}{6\sqrt{2}a_0}$	$-\frac{\sqrt{5}}{6a_0}$	$\frac{17}{6a_0}$	$-\frac{7}{3\sqrt{2}a_0}$	0
$\Delta_{1^{-}}^{\#5} \dagger^{\alpha}$	0	0	0	0	0	$-\frac{1}{6a_0}$	$-\frac{\sqrt{5}}{6a_0}$	$-\frac{7}{3\sqrt{2}a_0}$	$\frac{5}{3a_0}$	0
$\Delta_{1^{-}}^{\#6} \dagger^{\alpha}$	0	0	0	0	0	0	0	0	0	0
$\mathcal{T}_{1^{-}}^{\#1} \dagger^{\alpha}$	0	0	0	0	0	0	0	0	0	0

Lagrangian density

$$-\frac{1}{2}a_0\,\Gamma^{\alpha\beta\chi}\,\Gamma_{\beta\chi\alpha}+\frac{1}{2}a_0\,\Gamma^{\alpha}\,\Gamma^{\alpha}\,\beta\,\Gamma^{\chi}\,\Gamma^{\chi}\,\beta\chi-\frac{1}{2}a_0\,\Gamma^{\alpha\beta\chi}\,\partial_{\beta}h_{\alpha\chi}-\frac{1}{2}a_0\,\Gamma^{\alpha}\,\Gamma^{\alpha}\,\beta\,\partial_{\beta}h^{\chi}\chi+\frac{1}{4}a_0\,\Gamma^{\alpha\beta}\,\Gamma^{\alpha}\,\partial_{\beta}h^{\chi}\chi-\frac{1}{4}a_0\,h^{\chi}\chi\,\partial_{\beta}\Gamma^{\alpha}\beta+\frac{1}{4}a_0\,h^{\chi}\chi\,\partial_{\beta}\Gamma^{\alpha\beta}-\frac{1}{2}a_0\,h_{\alpha\chi}h_{\alpha\chi}\partial_{\beta}\Gamma^{\alpha\beta}+\frac{1}{4}a_0\,h^{\alpha\beta}\,\partial_{\beta}\partial_{\alpha}h^{\chi}\chi-\frac{1}{8}a_0\,\partial_{\beta}h^{\chi}\chi\,\partial^{\beta}h^{\alpha}\alpha+\frac{1}{2}a_0\,\Gamma^{\alpha}\,\Gamma^{\alpha}\,\beta\,\partial_{\chi}h^{\chi}\beta-\frac{1}{2}a_0\,\partial_{\alpha}h^{\alpha\beta}\,\partial_{\chi}h^{\chi}\chi+\frac{1}{2}a_0\,\partial^{\beta}h^{\alpha}\alpha\,\partial_{\chi}h^{\chi}\beta-a_0\,h^{\alpha\beta}\,\partial_{\chi}\partial_{\beta}h^{\chi}\chi+\frac{1}{4}a_0\,h^{\alpha}\alpha\,\partial_{\chi}\partial_{\beta}h^{\beta\chi}+\frac{1}{2}a_0\,h^{\alpha\beta}\,\partial_{\chi}\partial^{\chi}h_{\alpha\beta}-\frac{1}{4}a_0\,h^{\alpha}\alpha\,\partial_{\chi}h^{\alpha}\alpha\,\partial_{\chi}\partial^{\chi}h^{\beta}\beta-\frac{1}{4}a_0\,\partial_{\beta}h^{\alpha\chi}\partial^{\chi}h^{\alpha\beta}+\frac{3}{8}a_0\,\partial_{\chi}h_{\alpha\beta}\partial^{\chi}h^{\alpha\beta}+\frac{1}{2}a_0\,h_{\beta\chi}\partial^{\chi}\Gamma^{\alpha}\beta$$

$$\text{Added source term: } \left| \begin{array}{l} h^{\alpha\beta} \mathcal{T}_{\alpha\beta} + \Gamma^{\alpha\beta\chi} \Delta_{\alpha\beta\chi} \end{array} \right.$$

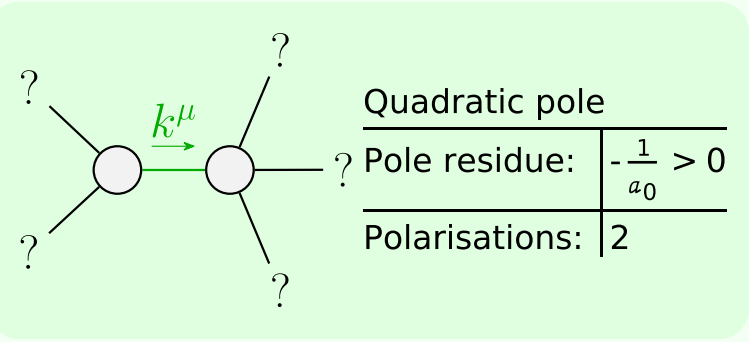
	$\Delta_{2^{+}}^{\#1} \alpha\beta$	$\Delta_{2^{+}}^{\#2} \alpha\beta$	$\Delta_{2^{+}}^{\#3} \alpha\beta$	$\mathcal{T}_{2^{+}}^{\#1} \alpha\beta$	$\Delta_{2^{-}}^{\#1} \alpha\beta\chi$	$\Delta_{2^{-}}^{\#2} \alpha\beta\chi$
$\Delta_{2^{+}}^{\#1} \dagger^{\alpha\beta}$	$\frac{4}{a_0}$	0	0	0	0	0
$\Delta_{2^{+}}^{\#2}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

Source constraints

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

	$\Gamma_{2^{+}}^{\#1} \alpha\beta$	$\Gamma_{2^{+}}^{\#2} \alpha\beta$	$\Gamma_{2^{+}}^{\#3} \alpha\beta$	$h_{2^{+}}^{\#1} \alpha\beta$	$\Gamma_{2^{-}}^{\#1} \alpha\beta\chi$	$\Gamma_{2^{-}}^{\#2} \alpha\beta\chi$
$\Gamma_{2^{+}}^{\#1} \dagger^{\alpha\beta}$	$\frac{a_0}{4}$	0	0	0	0	0
$\Gamma_{2^{+}}^{\#2} \dagger^{\alpha\beta}$	0	$-\frac{a_0}{2}$	0	0	0	0
$\Gamma_{2^{+}}^{\#3} \dagger^{\alpha\beta}$	0	0	$\frac{a_0}{4}$	0	0	0
$h_{2^{+}}^{\#1} \dagger^{\alpha\beta}$	0	0	0	$-\frac{a_0 k^2}{8}$	0	0
$\Gamma_{2^{-}}^{\#1} \dagger^{\alpha\beta\chi}$	0	0	0	0	$\frac{a_0}{4}$	0
$\Gamma_{2^{-}}^{\#2} \dagger^{\alpha\beta\chi}$	0	0	0	0	0	$\frac{a_0}{4}$

	$\Gamma_{0^{+}}^{\#1}$	$\Gamma_{0^{+}}^{\#2}$	$\Gamma_{0^{+}}^{\#3}$	$\Gamma_{0^{+}}^{\#4}$	$h_{0^{+}}^{\#1}$	$h_{0^{+}}^{\#2}$	$\Gamma_{0^{-}}^{\#1}$
$\Gamma_{0^{+}}^{\#1} \dagger$	$-\frac{a_0}{2}$	0	0	0	0	0	0
$\Gamma_{0^{+}}^{\#2} \dagger$	0	0	$\frac{a_0}{2}$	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
$\Gamma_{0^{+}}^{\#3} \dagger$	0	$\frac{a_0}{2}$	0	$-\frac{a_0}{2\sqrt{2}}$	0	0	0
$\Gamma_{0^{+}}^{\#4} \dagger$	0	$-\frac{a_0}{2\sqrt{2}}$	$-\frac{a_0}{2\sqrt{2}}$	$\frac{a_0}{2}$	0	0	0
$h_{0^{+}}^{\#1} \dagger$	0	0	0	0	$\frac{a_0 k^2}{4}$	0	0
$h_{0^{+}}^{\#2} \dagger$	0	0	0	0	0	0	0
$\Gamma_{0^{-}}^{\#1} \dagger$	0	0	0	0	0	0	$-\frac{a_0}{2}$



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

$$\frac{a_0 < 0}{\text{Unitarity conditions}}$$

(No massive particles)