

	$\Delta_{1^+a\beta}^{*1}$	$\Delta_{1^+a\beta}^{*2}$	$\Delta_{1^+a\beta}^{*3}$	$\Delta_{1^+a}^{*1}$	$\Delta_{1^+a}^{*2}$	$\Delta_{1^+a}^{*3}$	$\Delta_{1^+a}^{*4}$	$\Delta_{1^+a}^{*5}$	$\Delta_{1^+a}^{*6}$	$\mathcal{T}_{1^+a}^{*1}$
$\Delta_{1^+1^+}^{*1+a\beta}$	$\frac{4}{3}(-\frac{1}{a_0+4a_1-4a_2}-\frac{2(a_1+a_2-2a_5-6a_7+2a_9)}{2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9)})$	$\frac{2}{3}\sqrt{2}(-\frac{1}{a_0+4a_1-4a_2}-\frac{2(2a_1+a_2-2a_5-6a_7+2a_9)}{2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9)})$	$-\frac{4(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*2+a\beta}$	$\frac{2}{3}\sqrt{2}(-\frac{1}{a_0+4a_1-4a_2}-\frac{2(2a_1+a_2-2a_5-6a_7+2a_9)}{2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9)})$	$-\frac{2}{3(a_0+4a_1-4a_2)}+\frac{8(2a_1+a_2-2a_5-6a_7+2a_9)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{4\sqrt{2}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*3+a\beta}$	$-\frac{4(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{4\sqrt{2}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$-\frac{4(a_0-2a_1-a_2)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*1+\alpha}$	0	0	0	$\frac{4(2a_1+a_2-2a_5-6a_7+2a_9)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{4\sqrt{2}(2a_1+a_2-2a_5-6a_7+2a_9)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0	0	$\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{4(2a_1+a_2+ag)}{3\sqrt{3}(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0
$\Delta_{1^+1^+}^{*2+\alpha}$	0	0	0	$\frac{4\sqrt{2}(2a_1+a_2-2a_5-6a_7+2a_9)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{8(2a_1+a_2-2a_5-6a_7+2a_9)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0	0	$-\frac{8(2a_1+a_2+ag)}{3\sqrt{3}(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$-\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	0
$\Delta_{1^+1^+}^{*3+\alpha}$	0	0	0	0	0	$-\frac{10}{9(a_0+2a_5-6a_7)}-\frac{1}{6(3a_0-2(a_5-8a_6+5a_7-4c_{13}k^2))}$	$\frac{1}{18}\sqrt{5}(-\frac{4}{a_0+2a_5-6a_7}-\frac{3}{3a_0-2a_5+16a_6-10a_7+8c_{13}k^2})$	$-\frac{1}{\sqrt{2}(9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2))}$	$-\frac{1}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	0
$\Delta_{1^+1^+}^{*4+\alpha}$	0	0	0	0	0	$-\frac{2}{9(a_0+2a_5-6a_7)}-\frac{5}{6(3a_0-2(a_5-8a_6+5a_7-4c_{13}k^2))}$	$-\frac{\sqrt{\frac{5}{2}}}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$-\frac{\sqrt{5}}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$-\frac{\sqrt{5}}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	0
$\Delta_{1^+1^+}^{*5+\alpha}$	0	0	0	$-\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$-\frac{8(2a_1+a_2+ag)}{3\sqrt{3}(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$-\frac{1}{\sqrt{2}(9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2))}$	$-\frac{\sqrt{\frac{5}{2}}}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$-\frac{8(a_0+2a_1+a_2)}{9(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}-\frac{1}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$(\sqrt{2}(12a_0^2-3a_3^2-a_0(30a_1+15a_2+2a_5-64a_6+22a_7+6a_9-32c_{13}k^2)+2(2a_1+a_2)(a_5-32a_6+11a_7-16c_{13}k^2)))/(9(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))(3a_0-2(a_5-8a_6+5a_7-4c_{13}k^2)))$	0
$\Delta_{1^+1^+}^{*6+\alpha}$	0	0	0	$\frac{4(2a_1+a_2+ag)}{3\sqrt{3}(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$\frac{4\sqrt{\frac{2}{3}}(2a_1+a_2+ag)}{3(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}$	$-\frac{1}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$-\frac{\sqrt{5}}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	$(\sqrt{2}(12a_0^2-3a_3^2-a_0(30a_1+15a_2+2a_5-64a_6+22a_7+6a_9-32c_{13}k^2)+2(2a_1+a_2)(a_5-32a_6+11a_7-16c_{13}k^2)))/(9(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))(3a_0-2(a_5-8a_6+5a_7-4c_{13}k^2)))$	$-\frac{-4a_0+8a_3+4a_2}{9(2(2a_1+a_2)(a_5+3a_7)+a_9^2+a_0(2a_1+a_2-2a_5-6a_7+2a_9))}-\frac{2}{9a_0-6(a_5-8a_6+5a_7-4c_{13}k^2)}$	0
$\mathcal{T}_{1^+1^+}^{*1+\alpha}$	0	0	0	0	0	0	0	0	0	0

	$\Gamma_{1^+a\beta}^{*1}$	$\Gamma_{1^+a\beta}^{*2}$	$\Gamma_{1^+a\beta}^{*3}$	$\Gamma_{1^+a}^{*1}$	$\Gamma_{1^+a}^{*2}$	$\Gamma_{1^+a}^{*3}$	$\Gamma_{1^+a}^{*4}$	$\Gamma_{1^+a}^{*5}$	$\Gamma_{1^+a}^{*6}$	$h_{1^+a}^{*1}$
$\Gamma_{1^+1^+}^{*1+a\beta}$	$\frac{1}{4}(-a_0-6a_1+5a_2)$	$-\frac{a_0+2a_1-3a_2}{2\sqrt{2}}$	$\frac{1}{4}(-2a_1-a_2-a_9)$	0	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*2+a\beta}$	$\frac{a_0+2a_1-3a_2}{2\sqrt{2}}$	$\frac{1}{2}(-2a_1+a_2)$	$\frac{2a_1+a_2+ag}{2\sqrt{2}}$	0	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*3+a\beta}$	$\frac{1}{4}(-2a_1-a_2-a_9)$	$\frac{2a_1+a_2+ag}{2\sqrt{2}}$	$-\frac{3}{4}(2a_1+a_2-2a_5-6a_7+2a_9)$	0	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*1+\alpha}$	0	0	0	$\frac{1}{12}(a_0-2a_1-a_2)$	$\frac{a_0-2a_1-a_2}{6\sqrt{2}}$	0	0	$-\frac{2a_1+a_2+ag}{2\sqrt{6}}$	$\frac{2a_1+a_2+ag}{4\sqrt{3}}$	0
$\Gamma_{1^+1^+}^{*2+\alpha}$	0	0	0	0	$\frac{1}{6}(a_0-2a_1-a_2)$	0	0	$-\frac{2a_1+a_2+ag}{2\sqrt{3}}$	$\frac{2a_1+a_2+ag}{2\sqrt{6}}$	0
$\Gamma_{1^+1^+}^{*3+\alpha}$	0	0	0	0	0	$\frac{1}{12}(-9a_0-14a_5-8a_6+50a_7-4c_{13}k^2)$	$\frac{1}{3}\sqrt{5}(a_5-2a_6-a_7-c_{13}k^2)$	$-\frac{3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2)}{12\sqrt{2}}$	$-\frac{a_0}{4}+\frac{1}{6}(a_5-8a_6+5a_7-4c_{13}k^2)$	0
$\Gamma_{1^+1^+}^{*4+\alpha}$	0	0	0	0	0	$\frac{1}{3}\sqrt{5}(a_5-2a_6-a_7-c_{13}k^2)$	$\frac{1}{12}(-9a_0+2a_5-40a_6+34a_7-20c_{13}k^2)$	$\frac{1}{12}\sqrt{\frac{5}{2}}(-3a_0+2(a_5+8a_6+5a_7-4c_{13}k^2))$	$\frac{1}{12}\sqrt{5}(-3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2))$	0
$\Gamma_{1^+1^+}^{*5+\alpha}$	0	0	0	$-\frac{2a_1+a_2+ag}{2\sqrt{6}}$	$-\frac{2a_1+a_2+ag}{2\sqrt{3}}$	$-\frac{3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2)}{12\sqrt{2}}$	$\frac{1}{12}\sqrt{\frac{5}{2}}(-3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2))$	$-\frac{3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2)}{6\sqrt{2}}$	$-\frac{1}{12}(-6a_0-6a_1-3a_2+10a_5-32a_6+38a_7-6a_9-16c_{13}k^2)$	0
$\Gamma_{1^+1^+}^{*6+\alpha}$	0	0	0	$\frac{2a_1+a_2+ag}{4\sqrt{3}}$	$\frac{2a_1+a_2+ag}{2\sqrt{6}}$	$-\frac{a_0}{4}+\frac{1}{6}(a_5-8a_6+5a_7-4c_{13}k^2)$	$\frac{1}{12}\sqrt{5}(-3a_0+2(a_5-8a_6+5a_7-4c_{13}k^2))$	$\frac{1}{12}$	$\frac{1}{12}$	0
$h_{1^+1^+}^{*1+\alpha}$	0	0	0	0	0	0	0	0	0	0

	$\Gamma_{1^+a\beta}^{*1}$	$\Gamma_{1^+a\beta}^{*2}$	$\Gamma_{1^+a\beta}^{*3}$	$\Gamma_{1^+a\beta}^{*4}$	$\Gamma_{1^+a\beta}^{*5}$	$\Gamma_{1^+a\beta}^{*6}$
$\Gamma_{1^+1^+}^{*1+a\beta}$	$\frac{1}{4}(a_0-2a_1-a_2)$	0	0	$-\frac{1}{4}\sqrt{3}(2a_1+a_2+ag)$	0	0
$\Gamma_{1^+1^+}^{*2+a\beta}$	0	$-\frac{3}{4}(a_0+2a_5-6a_7)$	0	0	0	0
$\Gamma_{1^+1^+}^{*3+a\beta}$	$\frac{1}{4}\sqrt{3}(2a_1+a_2+ag)$	0	$-\frac{3}{4}(2a_1+a_2-2a_5-6a_7+2a_9)$	0	0	0
$\Gamma_{1^+1^+}^{*4+a\beta}$	0	0	0	$-\frac{a_0k^2}{8}$	0	0
$\Gamma_{1^+1^+}^{*5+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*6+a\beta}$	0	0	0	0	0	0
Added source term:	$h^{\alpha\beta}\mathcal{T}_{\alpha\beta}+\Gamma^{\alpha\beta\chi}\Delta_{\alpha\beta\chi}$					

	$\Gamma_{1^+a\beta}^{*1}$	$\Gamma_{1^+a\beta}^{*2}$	$\Gamma_{1^+a\beta}^{*3}$	$\Gamma_{1^+a\beta}^{*4}$	$\Gamma_{1^+a\beta}^{*5}$	$\Gamma_{1^+a\beta}^{*6}$
$\Gamma_{1^+1^+}^{*1+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*2+a\beta}$	$\frac{1}{4}(-3a_0-2(a_5+4a_6-7a_7))$	$a_5-2a_6-a_7$	$a_5-2a_6-a_7$	$-\frac{3a_0+2(a_5-8a_6+5a_7)}{4\sqrt{2}}$	0	0
$\Gamma_{1^+1^+}^{*3+a\beta}$	0	$a_5-2a_6-a_7$	$\frac{1}{4}(-3a_0-2(a_5+4a_6-7a_7))$	$\frac{3a_0+2(a_5-8a_6+5a_7)}{4\sqrt{2}}$	0	0
$\Gamma_{1^+1^+}^{*4+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*5+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*6+a\beta}$	0	0	0	0	0	0

	$\Gamma_{1^+a\beta}^{*1}$	$\Gamma_{1^+a\beta}^{*2}$	$\Gamma_{1^+a\beta}^{*3}$	$\Gamma_{1^+a\beta}^{*4}$	$\Gamma_{1^+a\beta}^{*5}$	$\Gamma_{1^+a\beta}^{*6}$
$\Gamma_{1^+1^+}^{*1+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*2+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*3+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*4+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*5+a\beta}$	0	0	0	0	0	0
$\Gamma_{1^+1^+}^{*6+a\beta}$	0	0	0	0	0	0

	$\Delta_{1^+a\beta}^{*1}$	$\Delta_{1^+a\beta}^{*2}$	$\Delta_{1^+a\beta}^{*3}$	$\Delta_{1^+a\beta}^{*4}$	$\mathcal{T}_{1^+a\beta}^{*1}$	$\mathcal{T}_{1^+a\beta}^{*2}$	$\Delta_{1^+a\beta}^{*1}$
$\Delta_{1^+1^+}^{*1+a\beta}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*2+a\beta}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*3+a\beta}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*4+a\beta}$	0	0	0	0	0	0	0
$\mathcal{T}_{1^+1^+}^{*1+a\beta}$	0	0	0	0	0	0	0
$\mathcal{T}_{1^+1^+}^{*2+a\beta}$	0	0	0	0	0	0	0
$\Delta_{1^+1^+}^{*1+\alpha}$	0	0	0	0	0	0	0

$$\Delta_{1^+a\beta}^{*1} \uparrow^{a\beta\chi} \frac{4}{3(a_0+2a_5-6a_7)} \Gamma_{1^+a\beta\chi}^{*1}$$

$$\Gamma_{1^+a\beta\chi}^{*1} \frac{3}{4}(a_0+2a_5-6a_7)$$

	Massive particle
Pole residue:	$\frac{1}{4c_{13}} > 0$
Polarisations:	3
Square mass:	$\frac{-3a_0+2(a_5-8a_6+5a_7)}{8c_{13}} > 0$
Spin:	1
Parity:	Odd

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

	Unitarity conditions
$a_0 < 0$ && $a_7 > \frac{1}{10}(3a_0-2a_5+16a_6)$ && $c_{13} > 0$	