

[illegible]

$-\frac{\alpha_0}{4} + \beta_1 + (\alpha_1 + \alpha_4) \kappa^2$	$\frac{i(\alpha_0 - \beta_1) \kappa}{2 \sqrt{2}}$	0
$-\frac{i(\alpha_0 - \beta_1) \kappa}{2 \sqrt{2}}$	$2 \beta_1 \kappa^2$	0
0	0	$-\frac{\alpha_0}{4} + \beta_1 + (\alpha_1 + \alpha_2) \kappa^2$

Source constraints	#
$\text{SO}(3) \text{ irreps}$	1
$r_0^{\#2} = 0$	
$t_1^{\#2\alpha} + 2ik\sigma_1^{\#2\alpha} = 0$	3
$\tau_1^{\#1\alpha} = 0$	3
$t_1^{\#1\alpha\beta} + ik\sigma_1^{\#2\alpha\beta} = 0$	3
Total #:	10


$\omega_0^{\#1} \uparrow$	$\omega_0^{\#1}$	$f_0^{\#1}$	$f_0^{\#2}$	$\omega_0^{\#1}$
$\omega_0^{\#1} \uparrow$	$\frac{\alpha_0}{2} + \beta_2 + (\alpha_4 + \alpha_6) \kappa^2$	$-\frac{i(\alpha_0 + 2\beta_2)\kappa}{\sqrt{2}}$	0	0
$f_0^{\#1} \uparrow$	$\frac{i(\alpha_0 + 2\beta_2)\kappa}{\sqrt{2}}$	$2\beta_2 \kappa^2$	0	0
$f_0^{\#2} \uparrow$	0	0	0	0
$\omega_0^{\#1} \uparrow$	0	0	0	$\frac{\alpha_0}{2} + 4\beta_3 + (\alpha_2 + \alpha_3) \kappa^2$

	$\sigma_0^{\#1}+$	$\tau_0^{\#1}+$	$\tau_0^{\#2}+$	$\sigma_0^{\#1}-$
$\sigma_0^{\#1}+$	$-\frac{4\beta_2}{\alpha_0^2+2\alpha_0\beta_2-4(\alpha_4+\alpha_6)\beta_2k^2}$	$\frac{i\sqrt{2}(\alpha_0+2\beta_2)}{-\alpha_0(\alpha_0+2\beta_2)k+4(\alpha_4+\alpha_6)\beta_2k^3}$	0	0
$\tau_0^{\#1}+$	$\frac{i\sqrt{2}(\alpha_0+2\beta_2)}{\alpha_0(\alpha_0+2\beta_2)k-4(\alpha_4+\alpha_6)\beta_2k^3}$	$\frac{\frac{\alpha_0}{2}+\beta_2+(\alpha_4+\alpha_6)k^2}{-\frac{1}{2}\alpha_0(\alpha_0+2\beta_2)k^2+2(\alpha_4+\alpha_6)\beta_2k^4}$	0	0
$\tau_0^{\#2}+$	0	0	0	0
$\sigma_0^{\#1}-$	0	0	0	$\frac{2}{\alpha_0+8\beta_3+2(\alpha_2+\alpha_3)k^2}$

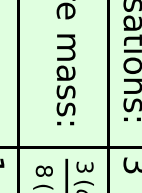
	$\sigma_{2+}^{\#1} \alpha\beta$	$\tau_{2+}^{\#1} \alpha\beta$	$\sigma_{2-}^{\#1} \alpha\beta\chi$
$\sigma_{2+}^{\#1} \dagger \alpha\beta$	$\frac{16\beta_1}{-\alpha_0^2 + 4\alpha_0\beta_1 + 16(\alpha_1 + \alpha_4)\beta_1 k^2}$	$\frac{2i\sqrt{2}(\alpha_0 - 4)\beta_1}{\alpha_0(\alpha_0 - 4)\beta_1 \cdot k \cdot 16(\alpha_1 + \alpha_4)\beta_1 k^3}$	0
$\tau_{2+}^{\#1} \dagger \alpha\beta$	$-\frac{2i\sqrt{2}(\alpha_0 - 4)\beta_1}{\alpha_0(\alpha_0 - 4)\beta_1 \cdot k \cdot 16(\alpha_1 + \alpha_4)\beta_1 k^3}$	$\frac{2(\alpha_0 - 4)(\beta_1 + (\alpha_1 + \alpha_4)k^2)}{k^2(\alpha_0^2 - 4\alpha_0\beta_1 - 16(\alpha_1 + \alpha_4)\beta_1 k^2)}$	0
$\sigma_{2-}^{\#1} \dagger \alpha\beta\chi$	0	0	$\frac{1}{-\frac{\alpha_0}{4} + \beta_1 + (\alpha_1 + \alpha_2)k^2}$

	$\omega_{1^+ \alpha \beta}^{\#1}$	$\omega_{1^+ \alpha \beta}^{\#2}$	$f_{1^+ \alpha \beta}^{\#1}$	$\omega_{1^- \alpha}^{\#1}$	$\omega_{1^- \alpha}^{\#2}$	$f_{1^- \alpha}^{\#1}$	$f_{1^- \alpha}^{\#2}$
$\omega_{1^+}^{\#1} \uparrow \alpha \beta$	$\frac{\alpha_0}{4} + \frac{1}{3} (\beta_1 + 8 \beta_3) + (\alpha_2 + \alpha_5) k^2$	$\frac{3 \alpha_0 - 4 \beta_1 + 16 \beta_3}{6 \sqrt{2}}$	$\frac{i (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{6 \sqrt{2}}$	0	0	0	0
$\omega_{1^+}^{\#2} \uparrow \alpha \beta$	$\frac{3 \alpha_0 - 4 \beta_1 + 16 \beta_3}{6 \sqrt{2}}$	$\frac{2}{3} (\beta_1 + 2 \beta_3)$	$\frac{2}{3} i (\beta_1 + 2 \beta_3) k$	0	0	0	0
$f_{1^+}^{\#1} \uparrow \alpha \beta$	$-\frac{i (3 \alpha_0 - 4 \beta_1 + 16 \beta_3) k}{6 \sqrt{2}}$	$-\frac{2}{3} i (\beta_1 + 2 \beta_3) k$	$\frac{2}{3} (\beta_1 + 2 \beta_3) k^2$	0	0	0	0
$\omega_{1^+}^{\#1} \uparrow \alpha$	0	0	0	$\frac{\alpha_0}{4} + \frac{1}{3} (\beta_1 + 2 \beta_2) + (\alpha_4 + \alpha_5) k^2$	$-\frac{3 \alpha_0 - 4 \beta_1 + 4 \beta_2}{6 \sqrt{2}}$	0	$-\frac{1}{6} i (3 \alpha_0 - 4 \beta_1 + 4 \beta_2) k$
$\omega_{1^+}^{\#2} \uparrow \alpha$	0	0	0	$-\frac{3 \alpha_0 - 4 \beta_1 + 4 \beta_2}{6 \sqrt{2}}$	$\frac{1}{3} (2 \beta_1 + \beta_2)$	0	$\frac{1}{3} i \sqrt{2} (2 \beta_1 + \beta_2) k$
$f_{1^+}^{\#1} \uparrow \alpha$	0	0	0	0	0	0	0
$f_{1^+}^{\#2} \uparrow \alpha$	0	0	0	$\frac{1}{6} i (3 \alpha_0 - 4 \beta_1 + 4 \beta_2) k$	$-\frac{1}{3} i \sqrt{2} (2 \beta_1 + \beta_2) k$	0	$\frac{2}{3} (2 \beta_1 + \beta_2) k^2$

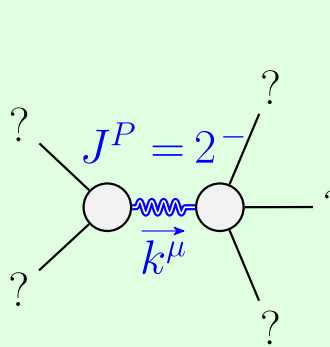
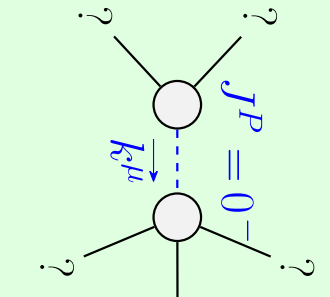
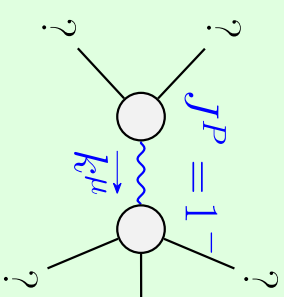
Quadratic pole
Pole residue: $\frac{1}{a_0} > 0$
Polarisations: 2

	
Massive particle	
Pole residue:	$\frac{1}{q_0} + \frac{\alpha_4 + \alpha_6 + 2\beta_2}{2\alpha_4\beta_2 + 2\alpha_6\beta_2} > 0$
Polarisations:	1
Square mass:	$\frac{q_0(q_0 + 2\beta_2)}{4(\alpha_4 + \alpha_6)\beta_2} > 0$
Spin:	0
Parity:	Even

Massive particle	
Pole residue:	$-\frac{2}{a_0} + \frac{a_1 + a_2 + 2\beta_1}{2a_1\beta_1 + 2a_2\beta_1} > 0$
Polarisations:	5
Square mass:	$\frac{a_0(a_0 - 4\beta_1)}{16(a_1 + a_2)\beta_1} > 0$
Spin:	2
Parity:	Even

	
Pole residue:	$-(3(\alpha_0^2(3\alpha_4 + 3\alpha_5 + 4\beta_1 + 2\beta_2) + 4\alpha_0(-2\alpha_4\beta_1 - 2\alpha_5\beta_1 - 4\beta_1^2 + 2\alpha_4\beta_2 + 2\alpha_5\beta_2 + \beta_2^2) + 8(-2\beta_1\beta_2(2\beta_1 + \beta_2) + \alpha_4(2\beta_1^2 + \beta_2^2) + \alpha_5(2\beta_1^2 + \beta_2^2))))/(2(\alpha_4 + \alpha_5)(2\beta_1 + \beta_2)(3\alpha_0^2 + 6\alpha_0(-2\beta_1 + \beta_2) + 4(2\alpha_5\beta_1 + \alpha_5\beta_2 - 6\beta_1\beta_2 + \alpha_4(2\beta_1 + \beta_2)))) > 0$
Polarisations:	3
Square mass:	$\frac{3(\alpha_0^4\beta_1)(\alpha_0 + 2\beta_2)}{8(\alpha_4 + \alpha_5)(2\beta_1 + \beta_2)} > 0$
Spin:	1
Parity:	Odd

Massive particle	
Pole residue:	$(3(\alpha_0^2(3\alpha_2+3\alpha_5+2\beta_1+4\beta_3)-$ $8\alpha_0(\beta_1^2+\alpha_2(\beta_1-4\beta_3))+\alpha_5(\beta_1-4\beta_3)-4\beta_3^2)+$ $16(-4\beta_1\beta_3(\beta_1+2\beta_3)+\alpha_2(\beta_1^2+8\beta_3^2)+\alpha_5(\beta_1^2+8\beta_3^2)))/$ $(2(\alpha_2+\alpha_5)(\beta_1+2\beta_3)(3\alpha_0^2-12\alpha_0(\beta_1-2\beta_3)+$ $16(\alpha_5\beta_1+2\alpha_5\beta_3-6\beta_1\beta_3+\alpha_2(\beta_1+2\beta_3))))>0$
Polarisations:	3
Square mass:	$\frac{3(\alpha_0-4\beta_1)(\alpha_0+8\beta_3)}{16(\alpha_2+\alpha_5)(\beta_1+2\beta_3)} > 0$
Spin:	1
Parity:	Even



Massive particle	
Pole residue:	$-\frac{1}{\alpha_1 + \alpha_2} > 0$
Polarisations:	5
Square mass:	$\frac{\alpha_0 - 4\beta_1}{4(\alpha_1 + \alpha_2)} > 0$
Spin:	2
Parity:	Odd