

$\omega_{2+}^{\#1} + \alpha\beta$	$f_{2+}^{\#1} + \alpha\beta$	$\omega_{2-}^{\#1} - \alpha\beta\chi$
$-\frac{\alpha_0}{4} + \beta_1$	$\frac{i(\alpha_0 - 4\beta_1)k}{2\sqrt{2}}$	0
$f_{2+}^{\#1} + \alpha\beta$	$2\beta_1 k^2$	0
$\omega_{2-}^{\#1} + \alpha\beta\chi$	0	$-\frac{\alpha_0}{4} + \beta_1$

	$\omega_{1^+}^{\#1} \alpha \beta$	$\omega_{1^+}^{\#2} \alpha \beta$	$f_{1^+}^{\#1} \alpha \beta$	$\omega_{1^-}^{\#1} \alpha$	$\omega_{1^-}^{\#2} \alpha$	$f_{1^-}^{\#1} \alpha$	$f_{1^-}^{\#2} \alpha$
$\omega_{1^+}^{\#1} \dagger \alpha \beta$	$\frac{1}{4} (\alpha_0 - 4 \beta_1)$	$\frac{\alpha_0 - 4 \beta_1}{2 \sqrt{2}}$	$\frac{i (\alpha_0 - 4 \beta_1) k}{2 \sqrt{2}}$	0	0	0	0
$\omega_{1^+}^{\#2} \dagger \alpha \beta$	$\frac{\alpha_0 - 4 \beta_1}{2 \sqrt{2}}$	0	0	0	0	0	0
$f_{1^+}^{\#1} \dagger \alpha \beta$	$-\frac{i (\alpha_0 - 4 \beta_1) k}{2 \sqrt{2}}$	0	0	0	0	0	0
$\omega_{1^-}^{\#1} \dagger \alpha$	0	0	0	$\frac{1}{4} (\alpha_0 - 4 \beta_1)$	$-\frac{\alpha_0 - 4 \beta_1}{2 \sqrt{2}}$	0	$-\frac{1}{2} i (\alpha_0 - 4 \beta_1) k$
$\omega_{1^-}^{\#2} \dagger \alpha$	0	0	0	$-\frac{\alpha_0 - 4 \beta_1}{2 \sqrt{2}}$	0	0	0
$f_{1^-}^{\#1} \dagger \alpha$	0	0	0	0	0	0	0
$f_{1^-}^{\#2} \dagger \alpha$	0	0	0	$\frac{1}{2} i (\alpha_0 - 4 \beta_1) k$	0	0	0

Source constraints	
SO(3) irreps	#
$\tau_{0+}^{\#2} == 0$	1
$\tau_1^{\#2\alpha} + 2i k \sigma_1^{\#2\alpha} == 0$	3
$\tau_1^{\#1\alpha} == 0$	3
$\tau_{1+}^{\#1\alpha\beta} + i k \sigma_{1+}^{\#2\alpha\beta} == 0$	3
Total #:	10

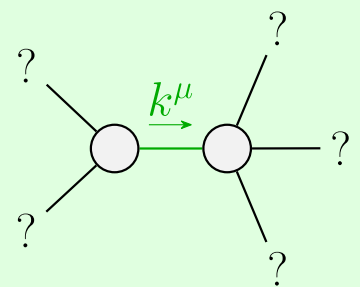
	$\sigma_{2^+ \alpha \beta}^{\#1}$	$\tau_{2^+ \alpha \beta}^{\#1}$	$\sigma_{2^- \alpha \beta \chi}^{\#1}$
$\sigma_{2^+}^{\#1} \dagger^{\alpha \beta}$	$-\frac{16 \beta_1}{\alpha_0^2 - 4 \alpha_0 \beta_1}$	$\frac{2 i \sqrt{2}}{\alpha_0 k}$	0
$\tau_{2^+}^{\#1} \dagger^{\alpha \beta}$	$-\frac{2 i \sqrt{2}}{\alpha_0 k}$	$\frac{2}{\alpha_0 k^2}$	0
$\sigma_{2^-}^{\#1} \dagger^{\alpha \beta \chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4} + \beta_1}$

	$\sigma_0^{#1+}$	$\tau_0^{#1+}$	$\tau_0^{#2+}$	$\sigma_0^{#1-}$
$\sigma_0^{#1+} \dagger$	$\frac{8\beta_1}{\alpha_0^{-2-4}\alpha_0\beta_1}$	$-\frac{i\sqrt{2}}{\alpha_0 k}$	0	0
$\tau_0^{#1+} \dagger$	$\frac{i\sqrt{2}}{\alpha_0 k}$	$-\frac{1}{\alpha_0 k^2}$	0	0
$\tau_0^{#2+} \dagger$	0	0	0	0
$\sigma_0^{#1-} \dagger$	0	0	0	$\frac{2}{\alpha_0^{-4}\beta_1+2\alpha_3k^2}$

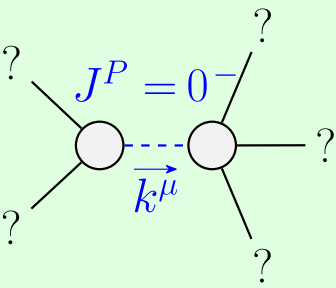
Lagrangian density		
$-\frac{1}{2} \alpha_0 \omega_{\alpha\chi\beta} \omega^{\alpha\beta\chi} - \frac{1}{2} \alpha_0 \omega_{\alpha}^{\alpha\beta} \omega_{\beta}^{\chi} \omega_{\chi}^{\alpha} + 2 \beta_1 \omega_{\alpha}^{\alpha\beta} \omega_{\alpha}^{\chi} \omega_{\beta}^{\chi} -$		
$2 \beta_1 \omega_{\alpha}^{\chi\delta} \omega_{\chi\delta}^{\alpha} - 2 \beta_1 \omega_{\alpha}^{\chi} \omega_{\chi}^{\alpha} \partial_{\beta} f^{\alpha\beta} - 2 \beta_1 \omega_{\alpha}^{\delta} \partial_{\beta} f^{\alpha\beta} - \alpha_0 f^{\alpha\beta} \partial_{\beta} \omega_{\alpha}^{\chi} +$		
$\alpha_0 \partial_{\beta} \omega^{\alpha\beta}_{\alpha} + \frac{2}{3} \alpha_3 \partial^{\alpha} \omega^{\beta\zeta}_{\chi} \partial_{\beta} \omega_{\zeta\alpha}^{\chi} + 2 \beta_1 \omega_{\beta}^{\chi} \omega_{\chi}^{\alpha} \partial^{\beta} f^{\alpha}_{\alpha} +$		
$2 \beta_1 \omega_{\beta}^{\delta} \partial^{\beta} f^{\alpha}_{\alpha} - 2 \beta_1 \partial_{\beta} f^{\chi}_{\chi} \partial^{\beta} f^{\alpha}_{\alpha} + \alpha_0 f^{\alpha\beta} \partial_{\chi} \omega_{\alpha}^{\chi} \omega_{\beta}^{\chi} -$		
$\alpha_0 f^{\alpha}_{\alpha} \partial_{\chi} \omega^{\beta\chi}_{\beta} - \frac{2}{3} \alpha_3 \partial_{\beta} \omega_{\zeta\alpha}^{\chi} \partial_{\chi} \omega^{\beta\zeta}_{\alpha} - \frac{1}{3} \alpha_3 \partial_{\beta} \omega_{\zeta\alpha}^{\chi} \partial_{\chi} \omega^{\zeta}_{\alpha} +$		
$4 \beta_1 \omega_{\alpha\chi\beta} \partial^{\chi} f^{\alpha\beta}_{\beta} + \beta_1 \partial_{\chi} f^{\delta}_{\beta} \partial^{\chi} f^{\beta}_{\delta} + \beta_1 \partial_{\chi} f^{\delta}_{\beta} \partial^{\chi} f^{\beta}_{\delta} +$		
$\frac{2}{3} \alpha_3 \partial_{\chi} \omega^{\beta\zeta}_{\alpha} \partial^{\chi} \omega_{\zeta\alpha\beta} + \frac{1}{3} \alpha_3 \partial_{\chi} \omega^{\zeta\alpha\beta} \partial^{\chi} \omega_{\zeta\alpha\beta} + 4 \beta_1 \partial^{\beta} f^{\alpha}_{\alpha} \partial_{\delta} f^{\delta}_{\beta} -$		
$2 \beta_1 \partial_{\beta} f^{\beta}_{\chi} \partial_{\delta} f^{\chi\delta}_{\alpha} + \frac{2}{3} \alpha_3 \partial^{\beta} \omega_{\alpha}^{\delta\zeta} \partial_{\delta} \omega_{\zeta\beta}^{\alpha} - \frac{2}{3} \alpha_3 \partial^{\beta} \omega_{\alpha}^{\zeta\delta} \partial_{\delta} \omega_{\zeta\beta}^{\alpha} -$		
$\beta_1 \partial^{\chi} f^{\beta}_{\zeta} \partial^{\zeta} f^{\alpha}_{\beta\chi} - \beta_1 \partial^{\chi} f^{\beta}_{\zeta} \partial^{\zeta} f^{\alpha}_{\chi\beta} + \beta_1 \partial^{\chi} f^{\alpha}_{\delta\zeta} \partial^{\zeta} f^{\delta}_{\chi} - \beta_1 \partial^{\chi} f^{\alpha}_{\zeta\delta} \partial^{\zeta} f^{\delta}_{\chi}$		
Added source term: $\left \frac{f^{\alpha\beta}_{\alpha\beta}}{\tau_{\alpha\beta}} + \omega^{\alpha\beta\chi}_{\alpha} \sigma_{\alpha\beta\chi} \right $		

	$\omega_{0+}^{\#1}$	$f_{0+}^{\#1}$	$f_{0+}^{\#2}$	$\omega_{0-}^{\#1}$
$\omega_{0+}^{\#1} \dagger$	$\frac{1}{2} (\alpha_0 - 4 \beta_1)$	$-\frac{i (\alpha_0 - 4 \beta_1) k}{\sqrt{2}}$	0	0
$f_{0+}^{\#1} \dagger$	$\frac{i (\alpha_0 - 4 \beta_1) k}{\sqrt{2}}$	$-4 \beta_1 k^2$	0	0
$f_{0+}^{\#2} \dagger$	0	0	0	0
$\omega_{0-}^{\#1} \dagger$	0	0	0	$\frac{\alpha_0}{2} - 2 \beta_1 + \alpha_3 k^2$

	$\sigma_{1+}^{\#1} + \alpha\beta$	$\sigma_{1+}^{\#2} + \alpha\beta$	$\tau_{1+}^{\#1} + \alpha\beta$	$\sigma_{1-}^{\#1} + \alpha$	$\sigma_{1-}^{\#2} + \alpha$	$\tau_{1-}^{\#1} + \alpha$	$\tau_{1-}^{\#2} + \alpha$
$\sigma_{1+}^{\#1} + \alpha\beta$	0	$\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+k^2)}$	$\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+k^2)}$	0	0	0	0
$\sigma_{1+}^{\#2} + \alpha\beta$	$\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+k^2)}$	$-\frac{2}{(\alpha_0-4\beta_1)(1+k^2)^2}$	$-\frac{2ik}{(\alpha_0-4\beta_1)(1+k^2)^2}$	0	0	0	0
$\tau_{1+}^{\#1} + \alpha\beta$	$-\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+k^2)}$	$\frac{2ik}{(\alpha_0-4\beta_1)(1+k^2)^2}$	$-\frac{2k^2}{(\alpha_0-4\beta_1)(1+k^2)^2}$	0	0	0	0
$\sigma_{1-}^{\#1} + \alpha$	0	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+2k^2)}$	0	$-\frac{4ik}{(\alpha_0-4\beta_1)(1+2k^2)}$
$\sigma_{1-}^{\#2} + \alpha$	0	0	0	$-\frac{2\sqrt{2}}{(\alpha_0-4\beta_1)(1+2k^2)}$	$-\frac{2}{(\alpha_0-4\beta_1)(1+2k^2)^2}$	0	$-\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+2k^2)^2}$
$\tau_{1-}^{\#1} + \alpha$	0	0	0	0	0	0	0
$\tau_{1-}^{\#2} + \alpha$	0	0	0	$\frac{4ik}{(\alpha_0-4\beta_1)(1+2k^2)}$	$\frac{2i\sqrt{2}k}{(\alpha_0-4\beta_1)(1+2k^2)^2}$	0	$-\frac{4k^2}{(\alpha_0-4\beta_1)(1+2k^2)^2}$



Quadratic pole	
Pole residue:	$\frac{1}{\alpha_0} > 0$
Polarisations:	2



Massive particle	
Pole residue:	$-\frac{1}{\alpha_3} > 0$
Polarisations:	1
Square mass:	$-\frac{\alpha_0 - 4\beta_1}{2\alpha_3} > 0$
Spin:	0
Parity:	Odd

Unitarity conditions

$$\alpha_0 > 0 \ \&\& \ \alpha_3 < 0 \ \&\& \ \beta_1 < \frac{\alpha_0}{4}$$