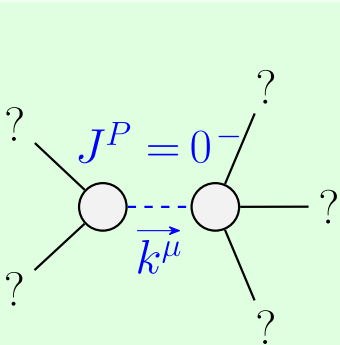
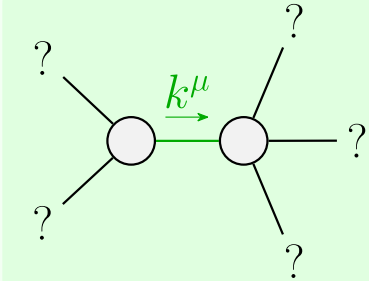


	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	0	$-\frac{\sqrt{2}}{t_1+k^2 t_1}$	$-\frac{i\sqrt{2} k}{t_1+k^2 t_1}$	0	0	0	0
$\sigma_{1^+}^{\#2}{}_{\dagger}{}^{\alpha\beta}$	$-\frac{\sqrt{2}}{t_1+k^2 t_1}$	$\frac{-2 k^2 (2 r_3+r_5)+t_1}{(1+k^2)^2 t_1^2}$	$\frac{-2 i k^3 (2 r_3+r_5)+i k t_1}{(1+k^2)^2 t_1^2}$	0	0	0	0
$\tau_{1^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{i\sqrt{2} k}{t_1+k^2 t_1}$	$\frac{i(2 k^3 (2 r_3+r_5)-k t_1)}{(1+k^2)^2 t_1^2}$	$\frac{-2 k^4 (2 r_3+r_5)+k^2 t_1}{(1+k^2)^2 t_1^2}$	0	0	0	0
$\sigma_{1^-}^{\#1}{}_{\dagger}{}^{\alpha}$	0	0	0	$\frac{1}{k^2 (2 r_3+r_5)}$	$-\frac{1}{\sqrt{2} (k^2+2 k^4) (2 r_3+r_5)}$	0	$-\frac{i}{k (1+2 k^2) (2 r_3+r_5)}$
$\sigma_{1^-}^{\#2}{}_{\dagger}{}^{\alpha}$	0	0	0	$-\frac{1}{\sqrt{2} (k^2+2 k^4) (2 r_3+r_5)}$	$\frac{6 k^2 (2 r_3+r_5)+t_1}{2 (k+2 k^3)^2 (2 r_3+r_5) t_1}$	0	$\frac{i (6 k^2 (2 r_3+r_5)+t_1)}{\sqrt{2} k (1+2 k^2)^2 (2 r_3+r_5) t_1}$
$\tau_{1^-}^{\#1}{}_{\dagger}{}^{\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#2}{}_{\dagger}{}^{\alpha}$	0	0	0	$\frac{i}{k (1+2 k^2) (2 r_3+r_5)}$	$-\frac{i (6 k^2 (2 r_3+r_5)+t_1)}{\sqrt{2} k (1+2 k^2)^2 (2 r_3+r_5) t_1}$	0	$\frac{6 k^2 (2 r_3+r_5)+t_1}{(1+2 k^2)^2 (2 r_3+r_5) t_1}$

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$k^2 (2 r_3+r_5)-\frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{i k t_1}{\sqrt{2}}$	0	0	0	0
$\omega_{1^+}^{\#2}{}_{\dagger}{}^{\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f_{1^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{i k t_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1^-}^{\#1}{}_{\dagger}{}^{\alpha}$	0	0	0	$k^2 (2 r_3+r_5)+\frac{t_1}{6}$	$\frac{t_1}{3 \sqrt{2}}$	0	$\frac{i k t_1}{3}$
$\omega_{1^-}^{\#2}{}_{\dagger}{}^{\alpha}$	0	0	0	$\frac{t_1}{3 \sqrt{2}}$	$\frac{t_1}{3}$	0	$\frac{1}{3} i \sqrt{2} k t_1$
$f_{1^-}^{\#1}{}_{\dagger}{}^{\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}{}_{\dagger}{}^{\alpha}$	0	0	0	$-\frac{1}{3} i k t_1$	$-\frac{1}{3} i \sqrt{2} k t_1$	0	$\frac{2 k^2 t_1}{3}$



Massive particle	
Pole residue:	$-\frac{1}{r_2} > 0$
Polarisations:	1
Square mass:	$\frac{t_1}{r_2} > 0$
Spin:	0
Parity:	Odd



Quadratic pole	
Pole residue:	$-\frac{1}{(2 r_3+r_5) t_1^2} > 0$
Polarisations:	2

Unitarity conditions  
 $r_2 < 0 \ \&\& \ r_5 < -2 \, r_3 \ \&\& \ t_1 < 0$

Added source term:

$$f^{\alpha\beta}{}_{\tau_{\alpha\beta}} + \omega^{\alpha\beta\chi}{}_{\sigma_{\alpha\beta\chi}}$$

$$\begin{aligned} & -\frac{1}{3} t_1 \omega_{\lambda'}^{\alpha'} \omega_{\kappa\alpha}^{\kappa} \omega_{\lambda'}^{\kappa\lambda} \omega_{\kappa\lambda}^{\lambda} - 2 r_3 \partial_{\lambda} \omega_{\lambda}^{\kappa\lambda} \partial_{\kappa} \omega_{\lambda}^{\alpha} - \\ & r_5 \partial_{\lambda} \omega_{\lambda}^{\kappa\lambda} \partial_{\kappa} \omega_{\lambda}^{\alpha} + \frac{2}{3} r_2 \partial^{\beta} \omega_{\theta\alpha}^{\theta\alpha} \partial_{\theta} \omega_{\alpha\beta}^{\kappa} \partial_{\kappa} \omega_{\alpha\beta}^{\theta} - \\ & \frac{2}{3} r_2 \partial_{\theta} \omega_{\alpha\beta}^{\kappa} \partial_{\kappa} \omega_{\theta\alpha\beta}^{\theta\alpha\beta} + 2 r_3 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} - r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} - \\ & 2 r_3 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} + r_5 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} + 2 r_5 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} - \\ & r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} + 4 r_3 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa\lambda}^{\theta\kappa\lambda} + 2 t_1 \partial^{\alpha} f_{\theta\kappa}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\kappa\theta}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda\alpha}^{\theta} + \\ & \frac{1}{2} t_1 \partial^{\alpha} f_{\theta\kappa}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\kappa\theta}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda\alpha}^{\theta} + \frac{1}{3} t_1 \omega_{\kappa\alpha}^{\alpha} \partial_{\kappa} f_{\lambda}^{\theta} + \frac{1}{3} t_1 \omega_{\kappa\lambda}^{\lambda} \partial_{\kappa} f_{\lambda}^{\theta} + \frac{2}{3} t_1 \partial^{\alpha} f_{\kappa\alpha}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \partial_{\kappa} f_{\lambda}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda}^{\theta} + \\ & 2 t_1 \omega_{\kappa\theta}^{\theta} \partial_{\kappa} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \omega_{\lambda\alpha}^{\alpha} \partial_{\alpha}^2 t_1 \omega_{\lambda}^{\lambda} \partial_{\kappa} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \omega_{\lambda\lambda}^{\lambda} \partial_{\kappa} f_{\lambda}^{\theta} + \frac{1}{2} t_1 \partial^{\alpha} f_{\kappa}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda\alpha}^{\theta} + \\ & \frac{1}{2} t_1 \partial_{\kappa} f_{\theta}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda}^{\theta} + \frac{1}{2} t_1 \partial_{\kappa} f_{\lambda}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \partial^{\alpha} f_{\lambda}^{\theta} \partial_{\alpha}^2 t_1 \partial^{\alpha} f_{\lambda\kappa}^{\theta} + \\ & \frac{1}{3} r_2 \partial_{\kappa} \omega^{\alpha\beta\theta} \partial^{\kappa} \omega_{\alpha\beta\theta} + \frac{2}{3} r_2 \partial_{\kappa} \omega_{\alpha\beta\theta}^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} - \frac{2}{3} r_2 \partial^{\beta} \omega_{\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\theta} + \\ & \frac{2}{3} r_2 \partial^{\beta} \omega_{\lambda}^{\lambda\alpha} \partial_{\lambda} \omega_{\alpha\beta}^{\theta} - 4 r_3 \partial^{\beta} \omega_{\lambda}^{\lambda\alpha} \partial_{\lambda} \omega_{\alpha\beta}^{\theta} - 2 r_3 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \partial^{\lambda} \omega_{\theta\kappa}^{\theta\kappa} + \\ & r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \partial^{\lambda} \omega_{\theta\kappa}^{\theta\kappa} + 2 r_3 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa}^{\theta\kappa} - r_5 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\theta\kappa}^{\theta\kappa} \end{aligned}$$

Lagrangian density

	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{t_1}{2}$	$-\frac{i k t_1}{\sqrt{2}}$	0
$f_{2^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{i k t_1}{\sqrt{2}}$	$k^2 t_1$	0
$\omega_{2^-}^{\#1}{}_{\dagger}{}^{\alpha\beta\chi}$	0	0	$\frac{t_1}{2}$

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}{}_{\dagger}$	$6 k^2 r_3$	0	0	0
$f_{0^+}^{\#1}{}_{\dagger}$	0	0	0	0
$f_{0^+}^{\#2}{}_{\dagger}$	0	0	0	0
$\omega_{0^-}^{\#1}{}_{\dagger}$	0	0	0	$k^2 r_2 - t_1$

	$\sigma_{2^+}^{\#1}{}_{\alpha\beta}$	$\tau_{2^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{2}{(1+2 k^2)^2 t_1}$	$-\frac{2 i \sqrt{2} k}{(1+2 k^2)^2 t_1}$	0
$\tau_{2^+}^{\#1}{}_{\dagger}{}^{\alpha\beta}$	$\frac{2 i \sqrt{2} k}{(1+2 k^2)^2 t_1}$	$\frac{4 k^2}{(1+2 k^2)^2 t_1}$	0
$\sigma_{2^-}^{\#1}{}_{\dagger}{}^{\alpha\beta\chi}$	0	0	$\frac{2}{t_1}$

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}{}_{\dagger}$	$\frac{1}{6 k^2 r_3}$	0	0	0
$\tau_{0^+}^{\#1}{}_{\dagger}$	0	0	0	0
$\tau_{0^+}^{\#2}{}_{\dagger}$	0	0	0	0
$\sigma_{0^-}^{\#1}{}_{\dagger}$	0	0	0	$\frac{1}{k^2 r_2 - t_1}$