	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{1}{k^2 (2 r_3+r_5)}$	0	0	0	0	0
$\sigma_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	0	0	0	0	0	0
$\tau_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	0	0	0	0	0	0
$\sigma_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	$\frac{2}{k^2 (r_3+2 r_5)}$	0	$\frac{4 i}{k (1+2 k^2) (r_3+2 r_5)}$
$\sigma_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$\frac{2 \sqrt{2}}{k^2 (1+2 k^2) (r_3+2 r_5)}$	0	$\frac{i \sqrt{2} (3 k^2 (r_3+2 r_5)+4 t_3)}{k (1+2 k^2)^2 (r_3+2 r_5) t_3}$
$\tau_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	$\frac{2 \sqrt{2}}{k^2 (1+2 k^2) (r_3+2 r_5)}$	0	0
$\tau_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$-\frac{4 i}{k (1+2 k^2) (r_3+2 r_5)}$	0	$\frac{6 k^2 (r_3+2 r_5)+8 t_3}{(1+2 k^2)^2 (r_3+2 r_5) t_3}$

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$k^2 (2 r_3+r_5)$	0	0	0	0	0	0
$\omega_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	0	0	0	0	0	0	0
$f_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	0	0	0	0	0	0	0
$\omega_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	$k^2 (\frac{r_3}{2}+r_5)+\frac{2 t_3}{3}$	$-\frac{\sqrt{2} t_3}{3}$	0	$-\frac{2}{3} i k t_3$
$\omega_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$-\frac{\sqrt{2} t_3}{3}$	$\frac{t_3}{3}$	0	$\frac{1}{3} i \sqrt{2} k t_3$
$f_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$\frac{2 i k t_3}{3}$	$-\frac{1}{3} i \sqrt{2} k t_3$	0	$\frac{2 k^2 t_3}{3}$

Lagrangian density

$$\frac{2}{3} t_3\, \omega_{\prime}^{\alpha\prime}{}_{\kappa\alpha} \omega_{\prime}^{\kappa}{}_{\alpha} + f^{\alpha\beta}{}_{\prime} \tau_{\alpha\beta} + \omega^{\alpha\beta\chi}{}_{\prime} \sigma_{\alpha\beta\chi} - \frac{1}{2} r_3\, \partial_{\prime} \omega^{\kappa\lambda}{}_{\kappa} \partial^{\prime} \omega_{\lambda}{}^{\alpha}{}_{\alpha} -$$
$$r_5\, \partial_{\prime} \omega^{\kappa\lambda}{}_{\kappa} \partial^{\prime} \omega_{\lambda}{}^{\alpha}{}_{\alpha} + \frac{1}{2} r_3\, \partial_{\alpha} \omega_{\lambda}{}^{\alpha}{}_{\theta} \partial_{\kappa} \omega^{\theta\kappa\lambda} -$$
$$\frac{1}{2} r_3\, \partial_{\theta} \omega_{\lambda}{}^{\alpha}{}_{\alpha} \partial_{\kappa} \omega^{\theta\kappa\lambda} + r_5\, \partial_{\theta} \omega_{\lambda}{}^{\alpha}{}_{\alpha} \partial_{\kappa} \omega^{\kappa\lambda\theta} -$$
$$r_5\, \partial_{\alpha} \omega_{\lambda}{}^{\alpha}{}_{\theta} \partial_{\kappa} \omega^{\kappa\lambda\theta} + r_3\, \partial_{\theta} \omega_{\lambda}{}^{\alpha}{}_{\alpha} \partial_{\kappa} \omega^{\kappa\lambda\theta} -$$
$$\frac{2}{3} t_3\, \omega_{\kappa\alpha}{}^{\alpha} \partial^{\kappa} f^{\prime}{}_{\prime} - \frac{2}{3} t_3\, \omega_{\kappa\lambda}{}^{\lambda} \partial^{\kappa} f^{\prime}{}_{\prime} + \frac{2}{3} t_3\, \partial_{\kappa} f^{\lambda}{}_{\lambda} \partial^{\kappa} f^{\prime}{}_{\prime} +$$
$$\frac{2}{3} t_3\, \omega_{\prime\alpha}{}^{\alpha} \partial^{\kappa} f^{\prime}{}_{\kappa} + \frac{2}{3} t_3\, \omega_{\prime\lambda}{}^{\lambda} \partial^{\kappa} f^{\prime}{}_{\kappa} - 4 r_3\, \partial^{\beta} \omega_{\prime}{}^{\lambda\alpha} \partial_{\lambda\alpha} \omega_{\alpha\beta}{}^{\prime} -$$
$$\frac{1}{2} r_3\, \partial_{\alpha} \omega_{\lambda}{}^{\alpha}{}_{\theta} \partial^{\lambda} \omega^{\theta\kappa}{}_{\kappa} + r_5\, \partial_{\alpha} \omega_{\lambda}{}^{\alpha}{}_{\theta} \partial^{\lambda} \omega^{\theta\kappa}{}_{\kappa} - r_5\, \partial_{\theta} \omega_{\lambda}{}^{\alpha}{}_{\alpha} \partial^{\lambda} \omega^{\theta\kappa}{}_{\kappa}$$

	$\sigma_{2^+}^{\#1}{}_{\alpha\beta}$	$\tau_{2^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^+}^{\#1}{}^{\dagger\alpha\beta}$	$-\frac{2}{3 k^2 r_3}$	0	0
$\tau_{2^+}^{\#1}{}^{\dagger\alpha\beta}$	0	0	0
$\sigma_{2^-}^{\#1}{}^{\dagger\alpha\beta\chi}$	0	0	0

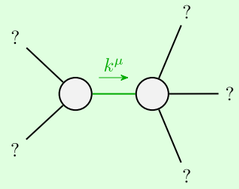
	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}{}^{\dagger\alpha\beta}$	$-\frac{3 k^2 r_3}{2}$	0	0
$f_{2^+}^{\#1}{}^{\dagger\alpha\beta}$	0	0	0
$\omega_{2^-}^{\#1}{}^{\dagger\alpha\beta\chi}$	0	0	0

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}{}^{\dagger}$	t_3	$-i \sqrt{2}\, k t_3$	0	0
$f_{0^+}^{\#1}{}^{\dagger}$	$i \sqrt{2}\, k t_3$	$2 k^2 t_3$	0	0
$f_{0^+}^{\#2}{}^{\dagger}$	0	0	0	0
$\omega_{0^-}^{\#1}{}^{\dagger}$	0	0	0	0

	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}{}^{\dagger}$	$-\frac{i \sqrt{2}\, k}{(1+2 k^2)^2 t_3}$	0
$\tau_{0^+}^{\#1}{}^{\dagger}$	$\frac{2 k^2}{(1+2 k^2)^2 t_3}$	0
$\tau_{0^+}^{\#2}{}^{\dagger}$	0	0
$\sigma_{0^-}^{\#1}{}^{\dagger}$	0	0

Source constraints

SO(3) irreps	#
$\sigma_{0^-}^{\#1} == 0$	1
$\tau_{0^+}^{\#2} == 0$	1
$\tau_{0^+}^{\#1} - 2 i k \sigma_{0^+}^{\#1} == 0$	1
$\tau_{1^-}^{\#2\alpha} + 2 i k\, \sigma_{1^-}^{\#2\alpha} == 0$	3
$\tau_{1^-}^{\#1\alpha} == 0$	3
$\tau_{1^+}^{\#1\alpha\beta} == 0$	3
$\sigma_{1^+}^{\#2\alpha\beta} == 0$	3
$\sigma_{2^-}^{\#1\alpha\beta\chi} == 0$	5
$\tau_{2^+}^{\#1\alpha\beta} == 0$	5
Total #:	25



Quadratic pole

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

(No massive particles)

Unitarity conditions

$$r_3 < 0 \,\&\&\, (r_5 < -\frac{r_3}{2} \,||\, r_5 > -2 r_3) \,\|\, r_3 > 0 \,\&\&\, -2 r_3 < r_5 < -\frac{r_3}{2}$$