	$\sigma^{\#1}_{1^+}{}_{\alpha\beta}$	$\sigma^{\#2}_{1^+}{}_{\alpha\beta}$	$\tau^{\#1}_{1^+}{}_{\alpha\beta}$	$\sigma^{\#1}_{1^-}{}_{\alpha}$	$\sigma^{\#2}_{1^-}{}_{\alpha}$	$\tau^{\#1}_{1^-}{}_{\alpha}$	$\tau^{\#2}_{1^-}{}_{\alpha}$
$\sigma^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$\frac{1}{k^2\,(2\,r_3+r_5)}$	$-\frac{\sqrt{2}}{k^2\,(1+k^2)\,(2\,r_3+r_5)}$	$-\frac{i\,\sqrt{2}}{k\,(1+k^2)\,(2\,r_3+r_5)}$	0	0	0	0
$\sigma^{\#2}_{1^+}{}^{\dagger\alpha\beta}$	$-\frac{\sqrt{2}}{k^2\,(1+k^2)\,(2\,r_3+r_5)}$	$\frac{3\,k^2\,(2\,r_3+r_5)+2\,t_2}{(k+k^3)^2\,(2\,r_3+r_5)\,t_2}$	$\frac{i\,(3\,k^2\,(2\,r_3+r_5)+2\,t_2)}{k\,(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	0
$\tau^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$\frac{i\,\sqrt{2}}{k\,(1+k^2)\,(2\,r_3+r_5)}$	$-\frac{i\,(3\,k^2\,(2\,r_3+r_5)+2\,t_2)}{k\,(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	$\frac{3\,k^2\,(2\,r_3+r_5)+2\,t_2}{(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	0
$\sigma^{\#1}_{1^-}{}^{\dagger\alpha}$	0	0	0	$\frac{2}{k^2\,(r_3+2\,r_5)}$	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0	$\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$
$\sigma^{\#2}_{1^-}{}^{\dagger\alpha}$	0	0	0	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	$\frac{3\,k^2\,(r_3+2\,r_5)+4\,t_3}{(k+2\,k^3)^2\,(r_3+2\,r_5)\,t_3}$	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	0	0	0	0
$\tau^{\#2}_{1^-}{}^{\dagger\alpha}$	0	0	0	$-\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$	$-\frac{i\,\sqrt{2}\,(3\,k^2\,(r_3+2\,r_5)+4\,t_3)}{k\,(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$	0	$\frac{6\,k^2\,(r_3+2\,r_5)+8\,t_3}{(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$

	$\omega^{\#1}_{1^+}{}_{\alpha\beta}$	$\omega^{\#2}_{1^+}{}_{\alpha\beta}$	$f^{\#1}_{1^+}{}_{\alpha\beta}$	$\omega^{\#1}_{1^-}{}_{\alpha}$	$\omega^{\#2}_{1^-}{}_{\alpha}$	$f^{\#1}_{1^-}{}_{\alpha}$	$f^{\#2}_{1^-}{}_{\alpha}$
$\omega^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$k^2\,(2\,r_3+r_5)+\frac{2\,t_2}{3}$	$\frac{\sqrt{2}\,t_2}{3}$	$\frac{1}{3}\,i\,\sqrt{2}\,k\,t_2$	0	0	0	0
$\omega^{\#2}_{1^+}{}^{\dagger\alpha\beta}$	$\frac{\sqrt{2}\,t_2}{3}$	$\frac{t_2}{3}$	$\frac{i\,k\,t_2}{3}$	0	0	0	0
$f^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_2$	$-\frac{1}{3}\,i\,k\,t_2$	$\frac{k^2\,t_2}{3}$	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	$-\frac{2}{3}\,i\,k\,t_3$
$\omega^{\#2}_{1^-}{}^{\dagger\alpha}$	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
$f^{\#2}_{1^-}{}^{\dagger\alpha}$	0	0	0	$\frac{2\,i\,k\,t_3}{3}$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_3$	0	$\frac{2\,k^2\,t_3}{3}$

Source constraints

SO(3) irreps	#
$\tau^{\#2}_{0^+} == 0$	1
$\tau^{\#1}_{0^+} - 2\,i\,k\,\sigma^{\#1}_{0^+} == 0$	1
$\tau^{\#2\,\alpha}_{1^-} + 2\,i\,k\,\sigma^{\#2\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha\beta}_{1^+} + i\,k\,\sigma^{\#2\,\alpha\beta}_{1^+} == 0$	3
$\sigma^{\#1\,\alpha\beta\chi}_{2^-} == 0$	5
$\tau^{\#1\,\alpha\beta}_{2^+} == 0$	5
Total #:	21

Added source term: $f^{\alpha\beta}\,\tau_{\alpha\beta} + \omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}$

Lagrangian density

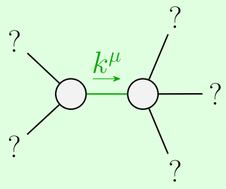
$$\frac{2}{3}\,t_3\,\omega_{\prime}{}^{\alpha\prime}\,\omega_{\kappa\alpha}{}^{\kappa} + \frac{2}{3}\,t_2\,\omega_{\prime}{}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\prime} + \frac{1}{3}\,t_2\,\omega_{\kappa\lambda}{}^{\prime}\,\omega^{\kappa\lambda}{}_{\prime} -$$
$$\frac{1}{2}\,r_3\,\partial_{\prime}\omega^{\kappa\lambda}{}_{\kappa}\,\partial^{\prime}\omega_{\lambda}{}^{\alpha}{}_{\alpha} - r_5\,\partial_{\prime}\omega^{\kappa\lambda}{}_{\kappa}\,\partial^{\prime}\omega_{\lambda}{}^{\alpha}{}_{\alpha} + \frac{2}{3}\,r_2\,\partial^{\beta}\omega^{\theta\alpha}{}_{\kappa}\,\partial_{\theta}\omega_{\alpha\beta}{}^{\kappa} -$$
$$\frac{1}{3}\,r_2\,\partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\,\partial_{\kappa}\omega^{\alpha\beta\theta} - \frac{2}{3}\,r_2\,\partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\,\partial_{\kappa}\omega^{\theta\alpha\beta} + \frac{1}{2}\,r_3\,\partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_{\kappa}\omega^{\theta\kappa\lambda} -$$
$$r_5\,\partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_{\kappa}\omega^{\theta\kappa\lambda} - \frac{1}{2}\,r_3\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_{\kappa}\omega^{\theta\kappa\lambda} + r_5\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_{\kappa}\omega^{\theta\kappa\lambda} -$$
$$\frac{1}{2}\,r_3\,\partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_{\kappa}\omega^{\kappa\lambda\theta} - r_5\,\partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_{\kappa}\omega^{\kappa\lambda\theta} + r_3\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_{\kappa}\omega^{\kappa\lambda\theta} +$$
$$2\,r_5\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_{\kappa}\omega^{\kappa\lambda\theta} + \frac{1}{6}\,t_2\,\partial^{\alpha}f_{\theta\kappa}\,\partial^{\kappa}f_{\alpha}{}^{\theta} - \frac{1}{6}\,t_2\,\partial^{\alpha}f_{\kappa\theta}\,\partial^{\kappa}f_{\alpha}{}^{\theta} +$$
$$\frac{1}{6}\,t_2\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f^{\prime}{}_{\alpha\lambda} - \frac{2}{3}\,t_3\,\omega_{\kappa\alpha}{}^{\alpha}\,\partial^{\kappa}f^{\prime}{}_{\prime} - \frac{2}{3}\,t_3\,\omega_{\kappa\lambda}{}^{\lambda}\,\partial^{\kappa}f^{\prime}{}_{\prime} - \frac{4}{3}\,t_3\,\partial^{\kappa}f_{\kappa\alpha}\,\partial^{\alpha}f^{\prime}{}_{\prime} +$$
$$\frac{2}{3}\,t_3\,\partial_{\kappa}f^{\lambda}{}_{\prime}\,\partial^{\kappa}f^{\prime}{}_{\prime} + \frac{1}{3}\,t_2\,\omega_{\prime\theta\kappa}\,\partial^{\kappa}f^{\prime\theta} - \frac{2}{3}\,t_2\,\omega_{\prime\kappa\theta}\,\partial^{\kappa}f^{\prime\theta} - \frac{1}{3}\,t_2\,\omega_{\theta\prime\kappa}\,\partial^{\kappa}f^{\prime\theta} +$$
$$\frac{2}{3}\,t_2\,\omega_{\theta\kappa\prime}\,\partial^{\kappa}f^{\prime\theta} + \frac{2}{3}\,t_3\,\omega_{\prime\alpha}{}^{\alpha}\,\partial^{\kappa}f^{\prime}{}_{\kappa} + \frac{2}{3}\,t_3\,\omega_{\prime\lambda}{}^{\lambda}\,\partial^{\kappa}f^{\prime}{}_{\kappa} - \frac{1}{6}\,t_2\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f_{\lambda\alpha} -$$
$$\frac{1}{6}\,t_2\,\partial_{\kappa}f^{\lambda}{}_{\theta}\,\partial^{\kappa}f_{\lambda}{}^{\theta} + \frac{1}{6}\,t_2\,\partial_{\kappa}f^{\lambda}{}_{\theta}\,\partial^{\kappa}f_{\lambda}{}^{\theta} + \frac{2}{3}\,t_3\,\partial^{\alpha}f^{\lambda}{}_{\alpha}\,\partial^{\kappa}f_{\lambda\kappa} +$$
$$\frac{1}{3}\,r_2\,\partial_{\kappa}\omega^{\alpha\beta\theta}\,\partial^{\kappa}\omega_{\alpha\beta\theta} + \frac{2}{3}\,r_2\,\partial_{\kappa}\omega^{\theta\alpha\beta}\,\partial^{\kappa}\omega_{\alpha\beta\theta} - \frac{2}{3}\,r_2\,\partial^{\beta}\omega_{\prime}{}^{\alpha\lambda}\,\partial_{\lambda}\omega_{\alpha\beta}{}^{\prime} +$$
$$\frac{2}{3}\,r_2\,\partial^{\beta}\omega_{\prime}{}^{\lambda\alpha}\,\partial_{\lambda}\omega_{\alpha\beta}{}^{\prime} - 4\,r_3\,\partial^{\beta}\omega_{\prime}{}^{\lambda\alpha}\,\partial_{\lambda}\omega_{\alpha\beta}{}^{\prime} - \frac{1}{2}\,r_3\,\partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa} +$$
$$\frac{1}{2}\,r_3\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa} + \frac{1}{2}\,r_3\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa} - r_5\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa}$$

	$\sigma^{\#1}_{0^+}$	$\tau^{\#1}_{0^+}$	$\tau^{\#2}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}{}^{\dagger}$	$\frac{1}{(1+2\,k^2)^2\,t_3}$	$-\frac{i\,\sqrt{2}\,k}{(1+2\,k^2)^2\,t_3}$	0	0
$\tau^{\#1}_{0^+}{}^{\dagger}$	$\frac{i\,\sqrt{2}\,k}{(1+2\,k^2)^2\,t_3}$	$\frac{2\,k^2}{(1+2\,k^2)^2\,t_3}$	0	0
$\tau^{\#2}_{0^+}{}^{\dagger}$	0	0	0	0
$\sigma^{\#1}_{0^-}{}^{\dagger}$	0	0	0	$\frac{1}{k^2\,r_2+t_2}$

	$\omega^{\#1}_{0^+}$	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}{}^{\dagger}$	t_3	$-i\,\sqrt{2}\,k\,t_3$	0	0
$f^{\#1}_{0^+}{}^{\dagger}$	$i\,\sqrt{2}\,k\,t_3$	$2\,k^2\,t_3$	0	0
$f^{\#2}_{0^+}{}^{\dagger}$	0	0	0	0
$\omega^{\#1}_{0^-}{}^{\dagger}$	0	0	0	$k^2\,r_2+t_2$

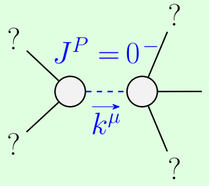
	$\omega^{\#1}_{2^+}{}^{\dagger\alpha\beta}$	$f^{\#1}_{2^+}{}^{\dagger\alpha\beta}$	$\omega^{\#1}_{2^+}{}^{\dagger\alpha\beta}$	
$\omega^{\#1}_{2^+}{}^{\dagger\alpha\beta\chi}$	0	0	$-\frac{3\,k^2\,r_3}{2}$	$\omega^{\#1}_{2^+}{}_{\alpha\beta}$
$f^{\#1}_{2^+}{}^{\dagger\alpha\beta}$	0	0	0	$f^{\#1}_{2^+}{}_{\alpha\beta}$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

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



Quadratic pole

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



Massive particle

Pole residue:	$-\frac{1}{r_2} > 0$
Polarisations:	1
Square mass:	$-\frac{t_2}{r_2} > 0$
Spin:	0
Parity:	Odd

Unitarity conditions

$r_2 < 0 \,\&\&\, r_3 < 0 \,\&\&\, r_5 < -\frac{r_3}{2} \,\&\&\, t_2 > 0 \,\|\, r_2 < 0 \,\&\&\, r_3 < 0 \,\&\&\, r_5 > -2\,r_3 \,\&\&\, t_2 > 0 \,\|\,$

$r_2 < 0 \,\&\&\, r_3 > 0 \,\&\&\, -2\,r_3 < r_5 < -\frac{r_3}{2} \,\&\&\, t_2 > 0$