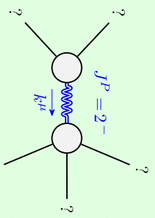

Massive particle	
Pole residue:	$-\frac{1}{r_1} > 0$
Polarisations:	5
Square mass:	$-\frac{t_1}{2 r_1} > 0$
Spin:	2
Parity:	Odd

Unitarity conditions

$r_1 < 0 \;\&\&\; t_1 > 0$

(No massless particles)

Lagrangian density

$$-\frac{1}{3} t_1\, \omega_{\iota}^{\alpha\prime}\, \omega_{\kappa\alpha}{}^{\kappa} - t_1\, \omega_{\iota}^{\kappa\lambda}\, \omega_{\kappa\lambda}{}' + f^{\alpha\beta}\, \tau_{\alpha\beta} + \omega^{\alpha\beta\chi}\, \sigma_{\alpha\beta\chi} +$$
$$r_1\, \partial_\iota \omega^{\kappa\lambda}{}_{\kappa}\, \partial' \omega_{\lambda}{}^{\alpha}{}_{\alpha} - \frac{2}{3} r_1\, \partial^\beta \omega^{\theta\alpha}{}_{\kappa}\, \partial_\theta \omega_{\alpha\beta}{}^{\kappa} - \frac{2}{3} r_1\, \partial_\theta \omega_{\alpha\beta}{}^{\kappa}\, \partial_\kappa \omega^{\alpha\beta\theta} +$$
$$\frac{2}{3} r_1\, \partial_\theta \omega_{\alpha\beta}{}^{\kappa}\, \partial_\kappa \omega^{\theta\alpha\beta} - 3 r_1\, \partial_\alpha \omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial_\kappa \omega^{\theta\kappa\lambda} + 4 r_3\, \partial_\alpha \omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial_\kappa \omega^{\theta\kappa\lambda} +$$
$$3 r_1\, \partial_\theta \omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial_\kappa \omega^{\theta\kappa\lambda} - 4 r_3\, \partial_\theta \omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial_\kappa \omega^{\theta\kappa\lambda} + r_1\, \partial_\alpha \omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial_\kappa \omega^{\kappa\lambda\theta} -$$
$$2 r_1\, \partial_\theta \omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial_\kappa \omega^{\kappa\lambda\theta} - \frac{1}{2} t_1\, \partial^\alpha f_{\theta\kappa}\, \partial^\kappa f_{\alpha}{}^{\theta} - \frac{1}{2} t_1\, \partial^\alpha f_{\kappa\theta}\, \partial^\kappa f_{\alpha}{}^{\theta} -$$
$$\frac{1}{2} t_1\, \partial^\alpha f^{\lambda}{}_{\kappa}\, \partial^\kappa f_{\alpha\lambda} + \frac{1}{3} t_1\, \omega_{\kappa\alpha}{}^{\alpha}\, \partial^\kappa f'_{\iota} + \frac{1}{3} t_1\, \omega_{\kappa\lambda}{}^{\lambda}\, \partial^\kappa f'_{\iota} + \frac{2}{3} t_1\, \partial^\alpha f_{\kappa\alpha}\, \partial^\kappa f'_{\iota} -$$
$$\frac{1}{3} t_1\, \partial_\kappa f^{\lambda}{}_{\lambda}\, \partial^\kappa f'_{\iota} + 2 t_1\, \omega_{\iota\kappa\theta}\, \partial^\kappa f'^{\theta} - \frac{1}{3} t_1\, \omega_{\iota\alpha}{}^{\alpha}\, \partial^\kappa f'_{\kappa} - \frac{1}{3} t_1\, \omega_{\iota\lambda}{}^{\lambda}\, \partial^\kappa f'_{\kappa} +$$
$$\frac{1}{2} t_1\, \partial^\alpha f^{\lambda}{}_{\kappa}\, \partial^\kappa f_{\lambda\alpha} + \frac{1}{2} t_1\, \partial_\kappa f_{\theta}{}^{\lambda}\, \partial^\kappa f_{\lambda}{}^{\theta} + \frac{1}{2} t_1\, \partial_\kappa f^{\lambda}{}_{\theta}\, \partial^\kappa f_{\lambda}{}^{\theta} - \frac{1}{3} t_1\, \partial^\alpha f^{\lambda}{}_{\alpha}\, \partial^\kappa f_{\lambda\kappa} +$$
$$\frac{2}{3} r_1\, \partial_\kappa \omega^{\alpha\beta\theta}\, \partial^\kappa \omega_{\alpha\beta\theta} - \frac{2}{3} r_1\, \partial_\kappa \omega^{\theta\alpha\beta}\, \partial^\kappa \omega_{\alpha\beta\theta} + \frac{2}{3} r_1\, \partial^\beta \omega_{\iota}{}^{\alpha\lambda}\, \partial_\lambda \omega_{\alpha\beta}{}' +$$
$$\frac{4}{3} r_1\, \partial^\beta \omega_{\iota}{}^{\lambda\alpha}\, \partial_\lambda \omega_{\alpha\beta}{}' - 4 r_3\, \partial^\beta \omega_{\iota}{}^{\lambda\alpha}\, \partial_\lambda \omega_{\alpha\beta}{}' + 3 r_1\, \partial_\alpha \omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial^\lambda \omega^{\theta\kappa}{}_{\kappa} -$$
$$4 r_3\, \partial_\alpha \omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial^\lambda \omega^{\theta\kappa}{}_{\kappa} - 3 r_1\, \partial_\theta \omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial^\lambda \omega^{\theta\kappa}{}_{\kappa} + 4 r_3\, \partial_\theta \omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial^\lambda \omega^{\theta\kappa}{}_{\kappa}$$

	$\sigma^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#2}_{1^+\,\alpha\beta}$	$\tau^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#1}_{1^-\,\alpha}$	$\sigma^{\#2}_{1^-\,\alpha}$	$\tau^{\#1}_{1^-\,\alpha}$	$\tau^{\#2}_{1^-\,\alpha}$
$\sigma^{\#1}_{1^+}{}^{\dagger\,\alpha\beta}$	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
$\sigma^{\#2}_{1^+}{}^{\dagger\,\alpha\beta}$	$-\frac{\sqrt{2}}{t_1+k^2 t_1}$	$\frac{-2k^2 r_1+t_1}{(1+k^2)^2 {t_1}^2}$	$-\frac{i(2k^3 r_1-k t_1)}{(1+k^2)^2 {t_1}^2}$	0	0	0	0
$\tau^{\#1}_{1^+}{}^{\dagger\,\alpha\beta}$	$\frac{i\sqrt{2}\,k}{t_1+k^2 t_1}$	$\frac{i(2k^3 r_1-k t_1)}{(1+k^2)^2 {t_1}^2}$	$\frac{-2k^4 r_1+k^2 t_1}{(1+k^2)^2 {t_1}^2}$	0	0	0	0
$\sigma^{\#1}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	$\frac{6}{(3+4k^2)^2 t_1}$	$\frac{6\sqrt{2}}{(3+4k^2)^2 t_1}$	0	$\frac{12ik}{(3+4k^2)^2 t_1}$
$\sigma^{\#2}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	$\frac{6\sqrt{2}}{(3+4k^2)^2 t_1}$	$\frac{12}{(3+4k^2)^2 t_1}$	0	$\frac{12i\sqrt{2}\,k}{(3+4k^2)^2 t_1}$
$\tau^{\#1}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	0	0	0	0
$\tau^{\#2}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	$-\frac{12ik}{(3+4k^2)^2 t_1}$	$-\frac{12i\sqrt{2}\,k}{(3+4k^2)^2 t_1}$	0	$\frac{24k^2}{(3+4k^2)^2 t_1}$

	$\omega^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#2}_{1^+\,\alpha\beta}$	$f^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#1}_{1^-\,\alpha}$	$\omega^{\#2}_{1^-\,\alpha}$	$f^{\#1}_{1^-\,\alpha}$	$f^{\#2}_{1^-\,\alpha}$
$\omega^{\#1}_{1^+}{}^{\dagger\,\alpha\beta}$	$k^2 r_1 - \frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{ikt_1}{\sqrt{2}}$	0	0	0	0
$\omega^{\#2}_{1^+}{}^{\dagger\,\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f^{\#1}_{1^+}{}^{\dagger\,\alpha\beta}$	$\frac{ikt_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega^{\#1}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	$\frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	$\frac{ikt_1}{3}$
$\omega^{\#2}_{1^-}{}^{\dagger\,\alpha}$	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
$f^{\#2}_{1^-}{}^{\dagger\,\alpha}$	0	0	0	$-\frac{1}{3} i k t_1$	$-\frac{1}{3} i\sqrt{2}\, k t_1$	0	$\frac{2k^2 t_1}{3}$

Source constraints	#
SO(3) irreps	
$\tau^{\#2}_{0^+} == 0$	1
$\tau^{\#1}_{0^+} == 0$	1
$\tau^{\#2\,\alpha}_{1^-} + 2 i k\, \sigma^{\#1\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha\beta}_{1^+} + i i k\, \sigma^{\#2\,\alpha\beta}_{1^-} == 0$	3
$\sigma^{\#1\,\alpha}_{1^-} == \sigma^{\#2\,\alpha}_{1^-}$	3
$\tau^{\#2\,\alpha\beta}_{1^+} - 2 i k\, \sigma^{\#1\,\alpha\beta}_{2^+} == 0$	5
Total #:	19

	$\sigma^{\#1}_{2^+\,\alpha\beta}$	$\tau^{\#1}_{2^+\,\alpha\beta}$	$\sigma^{\#1}_{2^-\,\alpha\beta\chi}$
$\sigma^{\#1}_{2^+}{}^{\dagger\,\alpha\beta}$	$\frac{2}{(1+2k^2)^2 t_1}$	$-\frac{2i\sqrt{2}\,k}{(1+2k^2)^2 t_1}$	0
$\tau^{\#1}_{2^+}{}^{\dagger\,\alpha\beta}$	$\frac{4k^2}{(1+2k^2)^2 t_1}$	$-\frac{2i\sqrt{2}\,k}{(1+2k^2)^2 t_1}$	0
$\sigma^{\#1}_{2^-}{}^{\dagger\,\alpha\beta\chi}$	0	0	$\frac{2}{2k^2 r_1+t_1}$

	$\omega^{\#1}_{0^+}$	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}{}^{\dagger}$	$6k^2(-r_1+r_3)$	0	0	0
$f^{\#1}_{0^+}{}^{\dagger}$	0	0	0	0
$f^{\#2}_{0^+}{}^{\dagger}$	0	0	0	0
$\omega^{\#1}_{0^-}{}^{\dagger}$	0	0	0	$-t_1$

	$\sigma^{\#1}_{0^+}$	$\tau^{\#1}_{0^+}$	$\tau^{\#2}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}{}^{\dagger}$	$\frac{1}{6k^2(-r_1+r_3)}$	0	0	0
$\tau^{\#1}_{0^+}{}^{\dagger}$	0	0	0	0
$\tau^{\#2}_{0^+}{}^{\dagger}$	0	0	0	0
$\sigma^{\#1}_{0^-}{}^{\dagger}$	0	0	0	$-\frac{1}{t_1}$

	$\omega^{\#1}_{2^+\,\alpha\beta}$	$f^{\#1}_{2^+\,\alpha\beta}$	$\omega^{\#1}_{2^-\,\alpha\beta\chi}$
$\omega^{\#1}_{2^+}{}^{\dagger\,\alpha\beta}$	$\frac{t_1}{2}$	$-\frac{ikt_1}{\sqrt{2}}$	0
$f^{\#1}_{2^+}{}^{\dagger\,\alpha\beta}$	$\frac{ikt_1}{\sqrt{2}}$	$k^2 t_1$	0
$\omega^{\#1}_{2^-}{}^{\dagger\,\alpha\beta\chi}$	0	0	$k^2 r_1 + \frac{t_1}{2}$