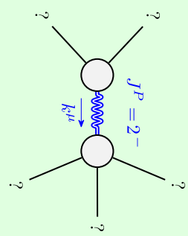

Massive particle	
Pole residue:	$-\frac{1}{r_1} > 0$
Square mass:	$-\frac{t_1}{2 r_1} > 0$
Polarisations:	5
Spin:	2
Parity:	Odd

Unitarity conditions

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

(No massless particles)

	$\sigma^{\#1}_{1^+}{}_{\alpha\beta}$	$\sigma^{\#2}_{1^+}{}_{\alpha\beta}$	$\tau^{\#1}_{1^+}{}_{\alpha\beta}$	$\sigma^{\#1}_{1^-}{}_{\alpha}$	$\sigma^{\#2}_{1^-}{}_{\alpha}$	$\tau^{\#1}_{1^-}{}_{\alpha}$	$\tau^{\#2}_{1^-}{}_{\alpha}$
$\sigma^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	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	$\frac{24k^2}{(3+4k^2)^2 t_1}$

Lagrangian density

$$-\tfrac{1}{3} t_1\, \omega_{\prime}{}^{\alpha\prime}\, \omega_{\kappa\alpha}{}^{\kappa} - t_1\, \omega_{\prime}{}^{\kappa\lambda}\, \omega_{\kappa\lambda}{}^{\prime} + f^{\alpha\beta}\, \tau_{\alpha\beta} + \omega^{\alpha\beta\chi}\, \sigma_{\alpha\beta\chi} + r_1\, \partial_{\prime}\omega^{\kappa\lambda}{}_{\kappa}\, \partial^{\prime}\omega_{\lambda}{}^{\alpha}{}_{\alpha} -$$
$$\tfrac{2}{3} r_1\, \partial^{\beta}\omega^{\theta\alpha}{}_{\kappa}\, \partial_{\theta}\omega_{\alpha\beta}{}^{\kappa} - \tfrac{2}{3} r_1\, \partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\, \partial_{\kappa}\omega^{\alpha\beta\theta} + \tfrac{2}{3} r_1\, \partial_{\theta}\omega_{\alpha\beta}{}^{\kappa}\, \partial_{\kappa}\omega^{\theta\alpha\beta} +$$
$$r_1\, \partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial_{\kappa}\omega^{\theta\kappa\lambda} - r_1\, \partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial_{\kappa}\omega^{\theta\kappa\lambda} + r_1\, \partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial_{\kappa}\omega^{\kappa\lambda\theta} - 2\, r_1\, \partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial_{\kappa}\omega^{\kappa\lambda\theta} -$$
$$\tfrac{1}{2} t_1\, \partial^{\alpha} f_{\theta\kappa}\, \partial^{\kappa} f_{\alpha}{}^{\theta} - \tfrac{1}{2} t_1\, \partial^{\alpha} f_{\kappa\theta}\, \partial^{\kappa} f_{\alpha}{}^{\theta} - \tfrac{1}{2} t_1\, \partial^{\alpha} f^{\lambda}{}_{\kappa}\, \partial^{\kappa} f_{\alpha\lambda} + \tfrac{1}{3} t_1\, \omega_{\kappa\alpha}{}^{\alpha}\, \partial^{\kappa} f^{\prime}{}_{\prime} +$$
$$\tfrac{1}{3} t_1\, \omega_{\kappa\lambda}{}^{\lambda}\, \partial^{\kappa} f^{\prime}{}_{\prime} + \tfrac{2}{3} t_1\, \partial^{\alpha} f_{\kappa\alpha}\, \partial^{\kappa} f^{\prime}{}_{\prime} - \tfrac{1}{3} t_1\, \partial_{\kappa} f^{\lambda}{}_{\lambda}\, \partial^{\kappa} f^{\prime}{}_{\prime} + 2\, t_1\, \omega_{\prime\kappa\theta}\, \partial^{\kappa} f^{\prime\theta} -$$
$$\tfrac{1}{3} t_1\, \omega_{\prime\alpha}{}^{\alpha}\, \partial^{\kappa} f^{\prime}{}_{\kappa} - \tfrac{1}{3} t_1\, \omega_{\prime\lambda}{}^{\lambda}\, \partial^{\kappa} f^{\prime}{}_{\kappa} + \tfrac{1}{2} t_1\, \partial^{\alpha} f^{\lambda}{}_{\kappa}\, \partial^{\kappa} f_{\lambda\alpha} + \tfrac{1}{2} t_1\, \partial_{\kappa} f_{\theta}{}^{\lambda}\, \partial^{\kappa} f_{\lambda}{}^{\theta} +$$
$$\tfrac{1}{2} t_1\, \partial_{\kappa} f^{\lambda}{}_{\theta}\, \partial^{\kappa} f_{\lambda}{}^{\theta} - \tfrac{1}{3} t_1\, \partial^{\alpha} f^{\lambda}{}_{\alpha}\, \partial^{\kappa} f_{\lambda\kappa} + \tfrac{2}{3} r_1\, \partial_{\kappa}\omega^{\alpha\beta\theta}\, \partial^{\kappa}\omega_{\alpha\beta\theta} - \tfrac{2}{3} r_1\, \partial_{\kappa}\omega^{\theta\alpha\beta}\, \partial^{\kappa}\omega_{\alpha\beta\theta} +$$
$$\tfrac{2}{3} r_1\, \partial^{\beta}\omega_{\prime}{}^{\alpha\lambda}\, \partial_{\lambda}\omega_{\alpha\beta}{}^{\prime} - \tfrac{8}{3} r_1\, \partial^{\beta}\omega_{\prime}{}^{\lambda\alpha}\, \partial_{\lambda}\omega_{\alpha\beta}{}^{\prime} - r_1\, \partial_{\alpha}\omega_{\lambda}{}^{\alpha}{}_{\theta}\, \partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa} + r_1\, \partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\, \partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa}$$

	$\omega^{\#1}_{1^+}{}_{\alpha\beta}$	$\omega^{\#2}_{1^+}{}_{\alpha\beta}$	$f^{\#1}_{1^+}{}_{\alpha\beta}$	$\omega^{\#1}_{1^-}{}_{\alpha}$	$\omega^{\#2}_{1^-}{}_{\alpha}$	$f^{\#1}_{1^-}{}_{\alpha}$	$f^{\#2}_{1^-}{}_{\alpha}$
$\omega^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$k^2 r_1 - \frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{i k t_1}{\sqrt{2}}$	0	0	0	0
$\omega^{\#2}_{1^+}{}^{\dagger\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f^{\#1}_{1^+}{}^{\dagger\alpha\beta}$	$\frac{i k t_1}{\sqrt{2}}$	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	$\frac{i k t_1}{3}$
$\omega^{\#2}_{1^-}{}^{\dagger\alpha}$	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	#
$\sigma^{\#1}_{0^+} == 0$	1
$\tau^{\#1}_{0^+} == 0$	1
$\tau^{\#2}_{0^+} == 0$	1
$\tau^{\#2\alpha}_{1^-} + 2 i k\, \sigma^{\#1\alpha}_{1^-} == 0$	3
$\tau^{\#1\alpha}_{1^-} == 0$	3
$\sigma^{\#1\alpha}_{1^-} == \sigma^{\#2\alpha}_{1^-}$	3
$\tau^{\#1\alpha\beta}_{1^+} + i k\, \sigma^{\#2\alpha\beta}_{1^+} == 0$	3
$\tau^{\#1\alpha\beta}_{2^+} - 2 i k\, \sigma^{\#1\alpha\beta}_{2^+} == 0$	5
Total #:	20

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

	$\omega^{\#1}_{0^+}$	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}{}^{\dagger}$	0	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	$-t_1$

	$\sigma^{\#1}_{0^+}$	$\tau^{\#1}_{0^+}$	$\tau^{\#2}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}{}^{\dagger}$	0	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	$-\frac{1}{t_1}$

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