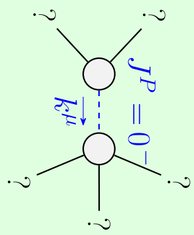
(No massless particles)



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

Lagrangian density

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

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

Unitarity conditions

$r_2 < 0\ \&\&\ t_2 > 0$

	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{2}{3k^2 r_3}$	$-\frac{2\sqrt{2}}{3k^2 r_3 + 3k^4 r_3}$	$-\frac{2i\sqrt{2}}{3k r_3 + 3k^3 r_3}$	0	0	0	0
$\sigma_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	$-\frac{2\sqrt{2}}{3k^2 r_3 + 3k^4 r_3}$	$\frac{9k^2 r_3 + 4t_2}{3(k+k^3)^2 r_3 t_2}$	$\frac{i(9k^2 r_3 + 4t_2)}{3k(1+k^2)^2 r_3 t_2}$	0	0	0	0
$\tau_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{2i\sqrt{2}}{3k r_3 + 3k^3 r_3}$	$-\frac{i(9k^2 r_3 + 4t_2)}{3k(1+k^2)^2 r_3 t_2}$	$\frac{9k^2 r_3 + 4t_2}{3(1+k^2)^2 r_3 t_2}$	0	0	0	0
$\sigma_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$\sigma_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	0	0	0	0

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{1}{6}(9k^2 r_3 + 4t_2)$	$\frac{\sqrt{2}\, t_2}{3}$	$\frac{1}{3} i\sqrt{2}\, k t_2$	0	0	0	0
$\omega_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	$\frac{\sqrt{2}\, t_2}{3}$	$\frac{t_2}{3}$	$\frac{i k t_2}{3}$	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	0	0	0	0
$\omega_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	0	0	0	0

Source constraints	#	Total #: 28
SO(3) irreps	1	
$\omega_{0^+}^{\#1}{}_{\alpha} == 0$	1	
$\tau_{0^+}^{\#2}{}_{\alpha} == 0$	1	
$\tau_{0^+}^{\#1}{}_{\alpha} == 0$	1	
$\sigma_{0^+}^{\#1}{}_{\alpha} == 0$	1	
$\tau_{1^-}^{\#2}{}^{\alpha} == 0$	3	
$\tau_{1^-}^{\#1}{}^{\alpha} == 0$	3	
$\sigma_{1^-}^{\#2}{}^{\alpha} == 0$	3	
$\sigma_{1^-}^{\#1}{}^{\alpha} == 0$	3	
$\tau_{1^+}^{\#1}{}_{\alpha\beta} + i k\, \sigma_{1^+}^{\#2}{}_{\alpha\beta} == 0$	3	
$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi} == 0$	5	
$\tau_{2^+}^{\#1}{}_{\alpha\beta} == 0$	5	

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

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}{}^{\dagger}$	0	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	$k^2 r_2 + t_2$

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}{}^{\dagger}$	0	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	$\frac{1}{k^2 r_2 + t_2}$

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