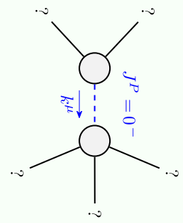
$r_2 < 0 \;\&\&\; t_2 > 0$



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

(No massless particles)

	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{1}{k^2 r_5}$	$-\frac{\sqrt{2}}{k^2 r_5+k^4 r_5}$	$-\frac{i\sqrt{2}}{k r_5+k^3 r_5}$	0	0	0	0
$\sigma_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	$-\frac{\sqrt{2}}{k^2 r_5+k^4 r_5}$	$\frac{3k^2 r_5+2t_2}{(k+k^3)^2 r_5 t_2}$	$\frac{i(3k^2 r_5+2t_2)}{k(1+k^2)^2 r_5 t_2}$	0	0	0	0
$\tau_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{i\sqrt{2}}{k r_5+k^3 r_5}$	$-\frac{i(3k^2 r_5+2t_2)}{k(1+k^2)^2 r_5 t_2}$	$\frac{3k^2 r_5+2t_2}{(1+k^2)^2 r_5 t_2}$	0	0	0	0
$\sigma_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	$\frac{1}{k^2 r_5}$	$\frac{\sqrt{2}}{k^2 r_5+2k^4 r_5}$	0	$\frac{2i}{k r_5+2k^3 r_5}$
$\sigma_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$\frac{\sqrt{2}}{k^2 r_5+2k^4 r_5}$	$\frac{3k^2 r_5+2t_3}{(k+2k^3)^2 r_5 t_3}$	0	$\frac{i\sqrt{2}(3k^2 r_5+2t_3)}{k(1+2k^2)^2 r_5 t_3}$
$\tau_{1^-}^{\#1}{}^{\dagger\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#2}{}^{\dagger\alpha}$	0	0	0	$-\frac{2i}{k r_5+2k^3 r_5}$	$-\frac{i\sqrt{2}(3k^2 r_5+2t_3)}{k(1+2k^2)^2 r_5 t_3}$	0	$\frac{6k^2 r_5+4t_3}{(1+2k^2)^2 r_5 t_3}$

Lagrangian density

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

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$k^2 r_5 + \frac{2t_2}{3}$	$\frac{\sqrt{2}\,t_2}{3}$	$\frac{1}{3} i \sqrt{2}\, k t_2$	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	$k^2 r_5 + \frac{2t_3}{3}$	$-\frac{\sqrt{2}\,t_3}{3}$	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	$\frac{2k^2 t_3}{3}$

Source constraints

SO(3) irreps	#
$\tau_{0^+}^{\#2} == 0$	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
$\tau_{1^+}^{\#1\alpha\beta} + i k\, \sigma_{1^+}^{\#2\alpha\beta} == 0$	3
$\sigma_{2^-}^{\#1\alpha\beta\chi} == 0$	5
$\tau_{2^+}^{\#1\alpha\beta} == 0$	5
$\sigma_{2^+}^{\#1\alpha\beta} == 0$	5
Total #:	26

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$f_{0^+}^{\#1}$	$\omega_{0^+}^{\#1}$
$\omega_{0^+}^{\#1}$	0	0	$i\sqrt{2}\, k t_3$	t_3
$f_{0^+}^{\#1}$	0	0	$2k^2 t_3$	$-i\sqrt{2}\, k t_3$
$f_{0^+}^{\#2}$	0	0	0	0
$\omega_{0^-}^{\#1}$	$k^2 r_2 + t_2$	0	0	0

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

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

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