	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#1}{}_{\alpha}$	$\sigma_{1^+}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	$-\frac{i\sqrt{2}\,k}{t_1+k^2 t_1}$	0	0	0	0
$\sigma_{1^+}^{\#2}{}^{\dagger}{}^{\alpha\beta}$	$-\frac{i(2k^3 r_1 - k t_1)}{(1+k^2)^2 t_1^2}$	0	0	0	0
$\tau_{1^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	$\frac{-2k^4 r_1 + k^2 t_1}{(1+k^2)^2 t_1^2}$	0	0	0	0
$\sigma_{1^-}^{\#1}{}^{\dagger}{}^{\alpha}$	0	$\frac{2(t_1+t_3)}{3 t_1 t_3}$	$-\frac{\sqrt{2}\,(t_1-2t_3)}{3(1+2k^2)t_1 t_3}$	0	$-\frac{2ikt_1-4ikt_3}{3t_1 t_3+6k^2 t_1 t_3}$
$\sigma_{1^-}^{\#2}{}^{\dagger}{}^{\alpha}$	0	$-\frac{\sqrt{2}\,k(t_1-2t_3)}{3(1+2k^2)t_1 t_3}$	$\frac{t_1+4t_3}{3(1+2k^2)^2 t_1 t_3}$	0	$\frac{i\sqrt{2}\,k(t_1+4t_3)}{3(1+2k^2)^2 t_1 t_3}$
$\tau_{1^-}^{\#1}{}^{\dagger}{}^{\alpha}$	0	0	0	0	0
$\tau_{1^-}^{\#2}{}^{\dagger}{}^{\alpha}$	0	$\frac{2ik(t_1-2t_3)}{3t_1 t_3+6k^2 t_1 t_3}$	$-\frac{i\sqrt{2}\,k(t_1+4t_3)}{3(1+2k^2)^2 t_1 t_3}$	0	$\frac{2k^2(t_1+4t_3)}{3(1+2k^2)^2 t_1 t_3}$

Lagrangian density

$$
\begin{aligned}
&-\tfrac{1}{3} t_1\, \omega_{\prime}^{\alpha\prime}\, \omega_{\kappa\alpha}^{\ \kappa} + \tfrac{2}{3} t_3\, \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}\, \partial^{\prime}\omega_{\kappa\lambda}^{\ \alpha} - \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\ \theta}^{\ \alpha}\, \partial_{\kappa}\omega^{\theta\kappa\lambda} + r_1\, \partial_{\alpha}\omega_{\lambda\ \theta}^{\ \alpha}\, \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_{\kappa\theta}\, \partial^{\kappa} f_{\alpha}^{\ \theta} - \tfrac{1}{2} t_1\, \partial^{\alpha} f_{\alpha}^{\ \theta}\, \partial^{\kappa} f_{\kappa\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_3\, \omega_{\kappa\alpha}^{\ \alpha}\, \partial^{\kappa} f_{\prime}^{\prime} - \tfrac{2}{3} t_3\, \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^{\kappa\lambda}\, \partial^{\kappa} f_{\lambda}^{\prime} + \tfrac{2}{3} t_3\, \partial^{\kappa} f_{\lambda\alpha}\, \partial^{\alpha} f_{\kappa}^{\prime} - \tfrac{4}{3} t_3\, \partial^{\alpha} f_{\kappa\alpha}\, \partial^{\kappa} f_{\prime}^{\prime} - \tfrac{1}{3} t_1\, \partial_{\kappa} f^{\kappa\lambda}\, \partial^{\kappa} f_{\lambda}^{\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_{\kappa}^{\prime} + \tfrac{2}{3} t_3\, \omega_{\prime\alpha}^{\ \alpha}\, \partial^{\kappa} f_{\kappa}^{\prime} + \tfrac{2}{3} t_3\, \omega_{\prime\lambda}^{\ \lambda}\, \partial^{\kappa} f_{\kappa}^{\prime} + \\
&\tfrac{1}{3} t_1\, \partial^{\alpha} f_{\lambda\alpha}\, \partial^{\kappa} f_{\lambda}^{\ \theta} + \tfrac{1}{2} t_1\, \partial_{\kappa} f^{\lambda}{}_{\theta}\, \partial^{\kappa} f_{\lambda}^{\ \theta} + \tfrac{1}{2} t_1\, \partial_{\kappa} f^{\lambda}{}_{\theta}\, \partial^{\kappa} f_{\lambda}^{\ \theta} - \\
&\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} - r_1\, \partial_{\alpha}\omega_{\lambda\ \theta}^{\ \alpha}\, \partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa} + r_1\, \partial_{\theta}\omega_{\lambda\ \alpha}^{\ \alpha}\, \partial^{\lambda}\omega^{\theta\kappa}{}_{\kappa}
\end{aligned}
$$

	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	0	0	0	0
$\omega_{1^+}^{\#2}{}^{\dagger}{}^{\alpha\beta}$	0	0	0	0
$f_{1^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	0	0	0	0
$\omega_{1^-}^{\#1}{}^{\dagger}{}^{\alpha}$	$\frac{1}{6}(t_1+4t_3)$	$\frac{t_1-2t_3}{3\sqrt{2}}$	$\frac{1}{3} i k (t_1-2t_3)$	0
$\omega_{1^-}^{\#2}{}^{\dagger}{}^{\alpha}$	$\frac{t_1-2t_3}{3\sqrt{2}}$	$\frac{t_1+t_3}{3}$	$\frac{1}{3} i\sqrt{2}\, k (t_1+t_3)$	0
$f_{1^-}^{\#1}{}^{\dagger}{}^{\alpha}$	0	0	0	$\frac{2}{3} k^2 (t_1+t_3)$
$f_{1^-}^{\#2}{}^{\dagger}{}^{\alpha}$	$-\frac{1}{3} i k (t_1-2t_3)$	$-\frac{1}{3} i\sqrt{2}\, k (t_1+t_3)$	0	0

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

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

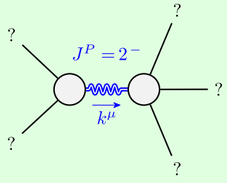
	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	$\frac{t_1}{2}$	$-\frac{i k t_1}{\sqrt{2}}$	0
$f_{2^+}^{\#1}{}^{\dagger}{}^{\alpha\beta}$	$\frac{i k t_1}{\sqrt{2}}$	$k^2 t_1$	0
$\omega_{2^-}^{\#1}{}^{\dagger}{}^{\alpha\beta\chi}$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

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}{}^{\dagger}$	t_3	$-i\sqrt{2}\, k t_3$	0	0
$f_{0^+}^{\#1}{}^{\dagger}$	$i\sqrt{2}\, k t_3$	$2k^2 t_3$	0	0
$f_{0^+}^{\#2}{}^{\dagger}$	0	0	0	0
$\omega_{0^-}^{\#1}{}^{\dagger}$	0	0	0	$-t_1$

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}{}^{\dagger}$	$\frac{1}{(1+2k^2)^2 t_3}$	$-\frac{i\sqrt{2}\,k}{(1+2k^2)^2 t_3}$	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	$-\frac{1}{t_1}$

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
$\tau_{2^+}^{\#1\,\alpha\beta} - 2 i k\, \sigma_{2^+}^{\#1\,\alpha\beta} == 0$	5
Total #:	16



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)