	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}{}_{\alpha\beta}\,\dagger$	$\frac{i\sqrt{2}\,k\,(t_1-2t_2)}{(1+k^2)\,(3t_1t_2+2k^2\,(2r_1+r_5)\,(t_1+t_2))}$	$-\frac{1}{2\,t_1+4k^2\,t_1}$	$\frac{\sqrt{2}}{t_1+2k^2\,t_1}$	0	0
$\sigma_{1^+}^{\#2}{}_{\alpha\beta}\,\dagger$	$\frac{\sqrt{2}\,(t_1-2t_2)}{(1+k^2)\,(3t_1t_2+2k^2\,(2r_1+r_5)\,(t_1+t_2))}$	0	0	0	0
$\tau_{1^+}^{\#1}{}_{\alpha\beta}\,\dagger$	$\frac{2\,(t_1+t_2)}{3t_1t_2+2k^2\,(2r_1+r_5)\,(t_1+t_2)}$	0	0	0	0
$\sigma_{1^-}^{\#1}{}_{\alpha}\,\dagger$	0	$\frac{\sqrt{2}}{t_1+2k^2\,t_1}$	$\frac{\sqrt{2}}{t_1+2k^2\,t_1}$	0	$\frac{2ik}{t_1+2k^2\,t_1}$
$\sigma_{1^-}^{\#2}{}_{\alpha}\,\dagger$	0	0	0	0	$-\frac{2k^2\,(r_1+r_5)+t_1}{(t_1+2k^2\,t_1)^2}$
$\tau_{1^-}^{\#1}{}_{\alpha}\,\dagger$	0	0	0	0	0
$\tau_{1^-}^{\#2}{}_{\alpha}\,\dagger$	0	$-\frac{2ik}{t_1+2k^2\,t_1}$	$\frac{ik\sqrt{2}\,k\,(2k^2\,(r_1+r_5)-t_1)}{(t_1+2k^2\,t_1)^2}$	0	$\frac{-4k^4\,(r_1+r_5)+2k^2\,t_1}{(t_1+2k^2\,t_1)^2}$

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

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

	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}\,\dagger$	$-t_1$	$i\sqrt{2}\,kt_1$	0	0
$f_{0^+}^{\#1}\,\dagger$	$-i\sqrt{2}\,kt_1$	$-2k^2\,t_1$	0	0
$f_{0^+}^{\#2}\,\dagger$	0	0	0	0
$\omega_{0^-}^{\#1}\,\dagger$	0	0	0	t_2

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}\,\dagger$	$-\frac{1}{(1+2k^2)^2\,t_1}$	$\frac{i\sqrt{2}\,k}{(1+2k^2)^2\,t_1}$	0	0
$\tau_{0^+}^{\#1}\,\dagger$	$-\frac{i\sqrt{2}\,k}{(1+2k^2)^2\,t_1}$	$-\frac{2k^2}{(1+2k^2)^2\,t_1}$	0	0
$\tau_{0^+}^{\#2}\,\dagger$	0	0	0	0
$\sigma_{0^-}^{\#1}\,\dagger$	0	0	0	$\frac{1}{t_2}$

Source constraints

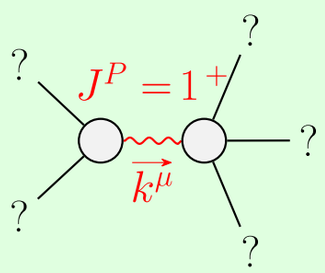
SO(3) irreps	#
$\tau_{0^+}^{\#2} == 0$	1
$\tau_{0^+}^{\#1} - 2\,i\,k\,\sigma_{0^+}^{\#1} == 0$	1
$\tau_{1^-}^{\#2\,\alpha} + 2\,i\,k\,\sigma_{1^-}^{\#2\,\alpha} == 0$	3
$\tau_{1^-}^{\#1\,\alpha} == 0$	3
$\tau_{1^+}^{\#1\,\alpha\beta} + i\,k\,\sigma_{1^+}^{\#2\,\alpha\beta} == 0$	3
$\tau_{2^+}^{\#1\,\alpha\beta} - 2\,i\,k\,\sigma_{2^+}^{\#1\,\alpha\beta} == 0$	5
Total #:	16

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$\frac{1}{6}\,(6\,k^2\,(2\,r_1+r_5)+t_1+4\,t_2)$	$-\frac{t_1-2t_2}{3\sqrt{2}}$	$-\frac{ik\,(t_1-2t_2)}{3\sqrt{2}}$	0	0	0	0
$\omega_{1^+}^{\#2}\,\dagger^{\alpha\beta}$	$-\frac{t_1-2t_2}{3\sqrt{2}}$	$\frac{t_1+t_2}{3}$	$\frac{1}{3}\,ik\,(t_1+t_2)$	0	0	0	0
$f_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{ik\,(t_1-2t_2)}{3\sqrt{2}}$	$-\frac{1}{3}\,ik\,(t_1+t_2)$	$\frac{1}{3}\,k^2\,(t_1+t_2)$	0	0	0	0
$\omega_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	$k^2\,(r_1+r_5)-\frac{t_1}{2}$	$\frac{t_1}{\sqrt{2}}$	0	$-ik\,t_1$
$\omega_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$\frac{t_1}{\sqrt{2}}$	0	0	0
$f_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$-ik\,t_1$	0	0	0

Lagrangian density

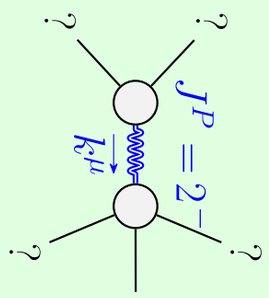
$$
\begin{aligned}
&-t_1\,\omega_{\ \ I}^{\alpha I}\,\omega_{\kappa\alpha}{}^{\kappa}-\frac{1}{3}\,t_1\,\omega_{\ \ I}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\prime}+\frac{2}{3}\,t_2\,\omega_{\ \ I}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\prime}+\frac{1}{3}\,t_1\,\omega_{\kappa\lambda}{}^{\prime}\,\omega^{\kappa\lambda}{}_{I}+\\
&\frac{1}{3}\,t_2\,\omega_{\kappa\lambda}{}^{\prime}\,\omega^{\kappa\lambda}{}_{I}-r_5\,\partial_I\omega^{\kappa\lambda}{}_{\kappa}\,\partial^{\prime}\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}-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}{3}\,t_1\,\partial^{\alpha}f_{\theta\kappa}\,\partial^{\kappa}f_{\alpha}{}^{\theta}+\frac{1}{6}\,t_2\,\partial^{\alpha}f_{\theta\kappa}\,\partial^{\kappa}f_{\alpha}{}^{\theta}-\frac{2}{3}\,t_1\,\partial^{\alpha}f_{\kappa\theta}\,\partial^{\kappa}f_{\alpha}{}^{\theta}-\\
&\frac{1}{6}\,t_2\,\partial^{\alpha}f_{\kappa\theta}\,\partial^{\kappa}f_{\alpha}{}^{\theta}-\frac{1}{3}\,t_1\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f_{\alpha\lambda}+\frac{1}{6}\,t_2\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f_{\alpha\lambda}+t_1\,\omega_{\kappa\alpha}{}^{\alpha}\,\partial^{\kappa}f^{\prime}{}_{I}+\\
&t_1\,\omega_{\kappa\lambda}{}^{\lambda}\,\partial^{\kappa}f^{\prime}{}_{I}+2\,t_1\,\partial^{\alpha}f_{\kappa\alpha}\,\partial^{\kappa}f^{\prime}{}_{I}-t_1\,\partial_{\kappa}f^{\lambda}{}_{\lambda}\,\partial^{\kappa}f^{\prime}{}_{I}+\frac{1}{3}\,t_1\,\omega_{I\theta\kappa}\,\partial^{\kappa}f^{I\theta}+\\
&\frac{1}{3}\,t_2\,\omega_{I\theta\kappa}\,\partial^{\kappa}f^{I\theta}+\frac{4}{3}\,t_1\,\omega_{I\kappa\theta}\,\partial^{\kappa}f^{I\theta}-\frac{2}{3}\,t_2\,\omega_{I\kappa\theta}\,\partial^{\kappa}f^{I\theta}-\frac{1}{3}\,t_1\,\omega_{\theta I\kappa}\,\partial^{\kappa}f^{I\theta}-\\
&\frac{1}{3}\,t_2\,\omega_{\theta I\kappa}\,\partial^{\kappa}f^{I\theta}+\frac{2}{3}\,t_1\,\omega_{\theta\kappa I}\,\partial^{\kappa}f^{I\theta}+\frac{2}{3}\,t_2\,\omega_{\theta\kappa I}\,\partial^{\kappa}f^{I\theta}-t_1\,\omega_{I\alpha}{}^{\alpha}\,\partial^{\kappa}f^{\prime}{}_{\kappa}-\\
&t_1\,\omega_{I\lambda}{}^{\lambda}\,\partial^{\kappa}f^{\prime}{}_{\kappa}+\frac{1}{3}\,t_1\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f_{\lambda\alpha}-\frac{1}{6}\,t_2\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\,\partial^{\kappa}f_{\lambda\alpha}+\frac{1}{3}\,t_1\,\partial_{\kappa}f_{\theta}{}^{\lambda}\,\partial^{\kappa}f_{\lambda}{}^{\theta}-\\
&\frac{1}{6}\,t_2\,\partial_{\kappa}f_{\theta}{}^{\lambda}\,\partial^{\kappa}f_{\lambda}{}^{\theta}+\frac{2}{3}\,t_1\,\partial_{\kappa}f^{\lambda}{}_{\theta}\,\partial^{\kappa}f_{\lambda}{}^{\theta}+\frac{1}{6}\,t_2\,\partial_{\kappa}f^{\lambda}{}_{\theta}\,\partial^{\kappa}f_{\lambda}{}^{\theta}-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_{\ \ I}^{\alpha\lambda}\,\partial_{\lambda}\omega_{\alpha\beta}{}^{\prime}-\\
&\frac{8}{3}\,r_1\,\partial^{\beta}\omega_{\ \ I}^{\lambda\alpha}\,\partial_{\lambda}\omega_{\alpha\beta}{}^{\prime}+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}
\end{aligned}
$$

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



Massive particle

Pole residue:	$\frac{-3t_1t_2\,(t_1+t_2)+6r_1\,(t_1{}^2+2t_2{}^2)+3r_5\,(t_1{}^2+2t_2{}^2)}{(2r_1+r_5)\,(t_1+t_2)\,(-3t_1t_2+4r_1\,(t_1+t_2)+2r_5\,(t_1+t_2))} > 0$
Polarisations:	3
Square mass:	$-\frac{3t_1t_2}{2\,(2r_1+r_5)\,(t_1+t_2)} > 0$
Spin:	1
Parity:	Even



Massive particle

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

Unitarity conditions

$r_1 < 0$ && $r_5 > -2\,r_1$ && $t_1 > 0$ && $-t_1 < t_2 < 0$

(No massless particles)