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

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

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

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

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$k^2(2r_1+r_5)+\frac{t_1}{6}$	$-\frac{t_1}{3\sqrt{2}}$	$-\frac{ikt_1}{3\sqrt{2}}$	0	0	0	0
$\omega_{1^+}^{\#2}{}^{\dagger\alpha\beta}$	$-\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	$\frac{ikt_1}{3}$	0	0	0	0
$f_{1^+}^{\#1}{}^{\dagger\alpha\beta}$	$\frac{ikt_1}{3\sqrt{2}}$	$-\frac{1}{3}ikt_1$	$\frac{k^2t_1}{3}$	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	ikt_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	$-ikt_1$	0	0	0

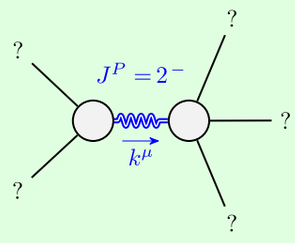
	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}{}^{\dagger}$	$-\frac{1}{(1+2k^2)^2t_1}$	$-\frac{i\sqrt{2}\,k}{(1+2k^2)^2t_1}$	0	0
$\tau_{0^+}^{\#1}{}^{\dagger}$	$-\frac{i\sqrt{2}\,k}{(1+2k^2)^2t_1}$	$-\frac{2k^2}{(1+2k^2)^2t_1}$	0	0
$\tau_{0^+}^{\#2}{}^{\dagger}$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

Lagrangian density

$$
\begin{aligned}
&-t_1\,\omega_{\iota}{}^{\alpha\iota}{}'\,\omega_{\kappa\alpha}{}^{\kappa}-\tfrac{1}{3}t_1\,\omega_{\iota}{}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}'+\tfrac{1}{3}t_1\,\omega_{\kappa\lambda}{}'\,\omega^{\kappa\lambda}{}_{\iota}+f^{\alpha\beta}\,\tau_{\alpha\beta}+\\
&\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}-r_5\,\partial_{\iota}\omega^{\kappa\lambda}{}_{\kappa}\partial'\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_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}+\\
&2r_5\,\partial_{\theta}\omega_{\lambda}{}^{\alpha}{}_{\alpha}\partial_{\kappa}\omega^{\kappa\lambda\theta}-\tfrac{1}{3}t_1\,\partial^{\alpha}f_{\theta\kappa}\partial^{\kappa}f_{\alpha}{}^{\theta}-\tfrac{2}{3}t_1\,\partial^{\alpha}f_{\kappa\theta}\partial^{\kappa}f_{\alpha}{}^{\theta}-\tfrac{1}{3}t_1\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\alpha\lambda}+\\
&t_1\,\omega_{\kappa\alpha}{}^{\alpha}\,\partial^{\kappa}f'_{\iota}+t_1\,\omega_{\kappa\lambda}{}^{\lambda}\,\partial^{\kappa}f'_{\iota}+2t_1\,\partial^{\alpha}f_{\kappa\alpha}\partial^{\kappa}f'_{\iota}-t_1\,\partial_{\kappa}f^{\lambda}{}_{\lambda}\partial^{\kappa}f'_{\iota}+\\
&\tfrac{1}{3}t_1\,\omega_{\iota\theta\kappa}\,\partial^{\kappa}f'^{\theta}+\tfrac{4}{3}t_1\,\omega_{\iota\kappa\theta}\,\partial^{\kappa}f'^{\theta}-\tfrac{1}{3}t_1\,\omega_{\theta\iota\kappa}\,\partial^{\kappa}f'^{\theta}+\tfrac{2}{3}t_1\,\omega_{\theta\kappa\iota}\,\partial^{\kappa}f'^{\theta}-\\
&t_1\,\omega_{\iota\alpha}{}^{\alpha}\,\partial^{\kappa}f'_{\kappa}-t_1\,\omega_{\iota\lambda}{}^{\lambda}\,\partial^{\kappa}f'_{\kappa}+\tfrac{1}{3}t_1\,\partial^{\alpha}f^{\lambda}{}_{\kappa}\partial^{\kappa}f_{\lambda\alpha}+\tfrac{1}{3}t_1\,\partial_{\kappa}f_{\theta}{}^{\lambda}\partial^{\kappa}f_{\lambda}{}^{\theta}+\\
&\tfrac{2}{3}t_1\,\partial_{\kappa}f^{\lambda}{}_{\theta}\partial^{\kappa}f_{\lambda}{}^{\theta}-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_{\iota}{}^{\alpha\lambda}\,\partial_{\lambda}\omega_{\alpha\beta}{}'-\tfrac{8}{3}r_1\,\partial^{\beta}\omega_{\iota}{}^{\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}
\end{aligned}
$$

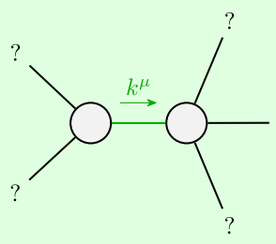
Source constraints

SO(3) irreps	#
$\sigma_{0^-}^{\#1} == 0$	1
$\tau_{0^+}^{\#2} == 0$	1
$\tau_{0^+}^{\#1}-2ik\,\sigma_{0^+}^{\#1} == 0$	1
$\tau_{1^-}^{\#2\,\alpha}+2ik\,\sigma_{1^-}^{\#2\,\alpha} == 0$	3
$\tau_{1^-}^{\#1\,\alpha} == 0$	3
$\tau_{1^+}^{\#1\,\alpha\beta}+ik\,\sigma_{1^+}^{\#2\,\alpha\beta} == 0$	3
$\tau_{2^+}^{\#1\,\alpha\beta}-2ik\,\sigma_{2^+}^{\#1\,\alpha\beta} == 0$	5
Total #:	17



Massive particle

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



Quadratic pole

Pole residue:	$\frac{1}{(2r_1+r_5)t_1{}^2p^2} > 0$
Polarisations:	2

Unitarity conditions

$r_1 < 0 \;\&\&\; r_5 > -2r_1 \;\&\&\; t_1 > 0$