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

Lagrangian density

$$-\frac{1}{3}t_1\,\omega_\iota{}^{\alpha\iota}\,\omega_{\kappa\alpha}{}^{\kappa}-t_1\,\omega_\iota{}^{\kappa\lambda}\,\omega_{\kappa\lambda}{}^{\iota}+f^{\alpha\beta}\,\tau_{\alpha\beta}+\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}-r_5\,\partial_\iota\omega^{\kappa\lambda}{}_{\kappa}\,\partial^\iota\omega_\lambda{}^{\alpha}{}_{\alpha}+$$
$$\frac{2}{3}r_2\,\partial^\beta\omega^{\theta\alpha}{}_{\kappa}\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa}-\frac{1}{3}r_2\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa}\,\partial_\kappa\omega^{\alpha\beta\theta}-\frac{2}{3}r_2\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa}\,\partial_\kappa\omega^{\theta\alpha\beta}-$$
$$r_5\,\partial_\alpha\omega_\lambda{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\theta\kappa\lambda}+r_5\,\partial_\theta\omega_\lambda{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda}-r_5\,\partial_\alpha\omega_\lambda{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\kappa\lambda\theta}+2r_5\,\partial_\theta\omega_\lambda{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}-$$
$$\frac{1}{2}t_1\,\partial^\alpha f_{\theta\kappa}\,\partial^\kappa f^{\theta}{}_{\alpha}-\frac{1}{2}t_1\,\partial^\alpha f_{\kappa\theta}\,\partial^\kappa f^{\theta}{}_{\alpha}-\frac{1}{2}t_1\,\partial^\alpha f^{\lambda}{}_{\kappa}\,\partial^\kappa f_{\alpha\lambda}+\frac{1}{3}t_1\,\omega_{\kappa\alpha}{}^{\alpha}\,\partial^\kappa f^{\iota}{}_{\iota}+$$
$$\frac{1}{3}t_1\,\omega_{\kappa\lambda}{}^{\lambda}\,\partial^\kappa f^{\iota}{}_{\iota}+\frac{2}{3}t_1\,\partial^\alpha f_{\kappa\alpha}\,\partial^\kappa f^{\iota}{}_{\iota}-\frac{1}{3}t_1\,\partial_\kappa f^{\lambda}{}_{\lambda}\,\partial^\kappa f^{\iota}{}_{\iota}+2t_1\,\omega_{\iota\kappa\theta}\,\partial^\kappa f^{\iota\theta}-$$
$$\frac{1}{3}t_1\,\omega_{\iota\alpha}{}^{\alpha}\,\partial^\kappa f^{\iota}{}_{\kappa}-\frac{1}{3}t_1\,\omega_{\iota\lambda}{}^{\lambda}\,\partial^\kappa f^{\iota}{}_{\kappa}+\frac{1}{2}t_1\,\partial^\alpha f^{\lambda}{}_{\kappa}\,\partial^\kappa f_{\lambda\alpha}+\frac{1}{2}t_1\,\partial_\kappa f^{\lambda}{}_{\theta}\,\partial^\kappa f^{\theta}{}_{\lambda}+$$
$$\frac{1}{2}t_1\,\partial_\kappa f^{\lambda}{}_{\theta}\,\partial^\theta f^{\kappa}{}_{\lambda}-\frac{1}{3}t_1\,\partial^\alpha f^{\lambda}{}_{\alpha}\,\partial^\kappa f_{\lambda\kappa}+\frac{1}{3}r_2\,\partial_\kappa\omega^{\alpha\beta\theta}\,\partial^\kappa\omega_{\alpha\beta\theta}+\frac{2}{3}r_2\,\partial_\kappa\omega^{\theta\alpha\beta}\,\partial^\kappa\omega_{\alpha\beta\theta}-$$
$$\frac{2}{3}r_2\,\partial^\beta\omega^{\alpha\lambda}{}_{\iota}\,\partial_\lambda\omega_{\alpha\beta}{}^{\iota}+\frac{2}{3}r_2\,\partial^\beta\omega^{\lambda\alpha}{}_{\iota}\,\partial_\lambda\omega_{\alpha\beta}{}^{\iota}+r_5\,\partial_\alpha\omega_\lambda{}^{\alpha}{}_{\theta}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa}-r_5\,\partial_\theta\omega_\lambda{}^{\alpha}{}_{\alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa}$$

	$\omega^{\#1}_{0^+}$	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}\dagger$	0	0	0	0
$f^{\#1}_{0^+}\dagger$	0	0	0	0
$f^{\#2}_{0^+}\dagger$	0	0	0	0
$\omega^{\#1}_{0^-}\dagger$	0	0	0	$k^2 r_2-t_1$

	$\sigma^{\#1}_{0^+}$	$\tau^{\#1}_{0^+}$	$\tau^{\#2}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}\dagger$	0	0	0	0
$\tau^{\#1}_{0^+}\dagger$	0	0	0	0
$\tau^{\#2}_{0^+}\dagger$	0	0	0	0
$\sigma^{\#1}_{0^-}\dagger$	0	0	0	$\frac{1}{k^2 r_2-t_1}$

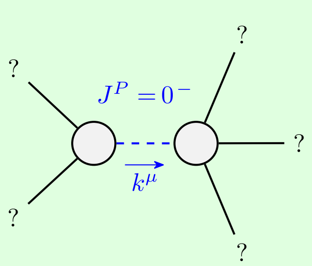
Source constraints

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

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

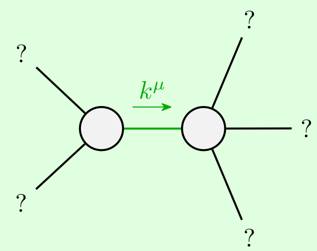
	$\omega^{\#1}_{1^+\alpha\beta}$	$\omega^{\#2}_{1^+\alpha\beta}$	$f^{\#1}_{1^+\alpha\beta}$	$\omega^{\#1}_{1^-\alpha}$	$\omega^{\#2}_{1^-\alpha}$	$f^{\#1}_{1^-\alpha}$	$f^{\#2}_{1^-\alpha}$
$\omega^{\#1}_{1^+}\dagger^{\alpha\beta}$	$k^2 r_5-\frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{ikt_1}{\sqrt{2}}$	0	0	0	0
$\omega^{\#2}_{1^+}\dagger^{\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{ikt_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	$k^2 r_5+\frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	$\frac{ikt_1}{3}$
$\omega^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	0	$\frac{1}{3}i\sqrt{2}\,kt_1$
$f^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	0	0	0	0
$f^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$-\frac{1}{3}ikt_1$	$-\frac{1}{3}i\sqrt{2}\,kt_1$	0	$\frac{2k^2 t_1}{3}$

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



Massive particle

Pole residue:	$-\frac{1}{r_2}>0$
Polarisations:	1
Square mass:	$\frac{t_1}{r_2}>0$
Spin:	0
Parity:	Odd



Quadratic pole

Pole residue:	$-\frac{1}{r_5 t_1^2}>0$
Polarisations:	2

Unitarity conditions

$r_2<0$ && $r_5<0$ && $t_1<0$