	$\omega^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#2}_{1^+\,\alpha\beta}$	$f^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#1}_{1^-\,\alpha}$	$\omega^{\#2}_{1^-\,\alpha}$	$f^{\#1}_{1^-\,\alpha}$	$f^{\#2}_{1^-\,\alpha}$
$\omega^{\#1}_{1^+}\dagger^{\alpha\beta}$	$k^2\,(2\,r_3+r_5)+\frac{2\,t_2}{3}$	$\frac{\sqrt{2}\,t_2}{3}$	$\frac{1}{3}\,i\,\sqrt{2}\,k\,t_2$	0	0	0	0
$\omega^{\#2}_{1^+}\dagger^{\alpha\beta}$	$\frac{\sqrt{2}\,t_2}{3}$	$\frac{t_2}{3}$	$\frac{i\,k\,t_2}{3}$	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	$k^2\,(\frac{r_3}{2}+r_5)+\frac{2\,t_3}{3}$	$-\frac{\sqrt{2}\,t_3}{3}$	0	$-\frac{2}{3}\,i\,k\,t_3$
$\omega^{\#2}_{1^-}\dagger^{\alpha}$	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
$f^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{2\,i\,k\,t_3}{3}$	$-\frac{1}{3}\,i\,\sqrt{2}\,k\,t_3$	0	$\frac{2\,k^2\,t_3}{3}$

	$\sigma^{\#1}_{2^+\,\alpha\beta}$	$\tau^{\#1}_{2^+\,\alpha\beta}$	$\sigma^{\#1}_{2^-\,\alpha\beta\chi}$
$\sigma^{\#1}_{2^+}\dagger^{\alpha\beta}$	$-\frac{2}{3\,k^2\,r_3}$	0	0
$\tau^{\#1}_{2^+}\dagger^{\alpha\beta}$	0	0	0
$\sigma^{\#1}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	0

	$\omega^{\#1}_{2^+\,\alpha\beta}$	$f^{\#1}_{2^+\,\alpha\beta}$	$\omega^{\#1}_{2^-\,\alpha\beta\chi}$
$\omega^{\#1}_{2^+}\dagger^{\alpha\beta}$	$-\frac{3\,k^2\,r_3}{2}$	0	0
$f^{\#1}_{2^+}\dagger^{\alpha\beta}$	0	0	0
$\omega^{\#1}_{2^-}\dagger^{\alpha\beta\chi}$	0	0	0

	$f^{\#1}_{0^+}$	$f^{\#2}_{0^+}$	$\omega^{\#1}_{0^-}$
$\omega^{\#1}_{0^+}\dagger$	t_3	$-i\,\sqrt{2}\,k\,t_3$	0
$f^{\#1}_{0^+}\dagger$	$i\,\sqrt{2}\,k\,t_3$	$2\,k^2\,t_3$	0
$f^{\#2}_{0^+}\dagger$	0	0	0
$\omega^{\#1}_{0^-}\dagger$	0	0	$k^2\,r_2+t_2$

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

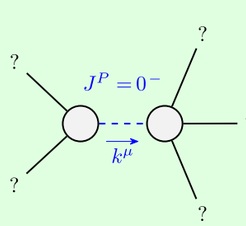
	$\tau^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#1}_{1^-\,\alpha}$	$\tau^{\#1}_{1^-\,\alpha}$	$\sigma^{\#2}_{1^-\,\alpha}$	$\tau^{\#2}_{1^-\,\alpha}$
$\sigma^{\#1}_{1^+}\dagger^{\alpha\beta}$	$-\frac{i\,\sqrt{2}}{k\,(1+k^2)\,(2\,r_3+r_5)}$	0	0	0	0
$\sigma^{\#2}_{1^+}\dagger^{\alpha\beta}$	$\frac{i\,(3\,k^2\,(2\,r_3+r_5)+2\,t_2)}{k\,(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	0
$\tau^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{3\,k^2\,(2\,r_3+r_5)+2\,t_2}{(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	0
$\sigma^{\#1}_{1^-}\dagger^{\alpha}$	0	$\frac{2}{k^2\,(r_3+2\,r_5)}$	0	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0
$\sigma^{\#2}_{1^-}\dagger^{\alpha}$	0	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0	$\frac{3\,k^2\,(r_3+2\,r_5)+4\,t_3}{(k+2\,k^3)^2\,(r_3+2\,r_5)\,t_3}$	0
$\tau^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	0	0
$\tau^{\#2}_{1^-}\dagger^{\alpha}$	0	$-\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0	$-\frac{i\,\sqrt{2}\,(3\,k^2\,(r_3+2\,r_5)+4\,t_3)}{k\,(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$	0

	$\sigma^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#2}_{1^+\,\alpha\beta}$	$\tau^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#1}_{1^-\,\alpha}$	$\sigma^{\#2}_{1^-\,\alpha}$	$\tau^{\#1}_{1^-\,\alpha}$	$\tau^{\#2}_{1^-\,\alpha}$
$\sigma^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{1}{k^2\,(2\,r_3+r_5)}$	$-\frac{\sqrt{2}}{k^2\,(1+k^2)\,(2\,r_3+r_5)}$	$-\frac{i\,\sqrt{2}}{k\,(1+k^2)\,(2\,r_3+r_5)}$	$\frac{2}{k^2\,(r_3+2\,r_5)}$	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0	$-\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$
$\sigma^{\#2}_{1^+}\dagger^{\alpha\beta}$	$-\frac{\sqrt{2}}{k^2\,(1+k^2)\,(2\,r_3+r_5)}$	$\frac{3\,k^2\,(2\,r_3+r_5)+2\,t_2}{(k+k^3)^2\,(2\,r_3+r_5)\,t_2}$	$\frac{i\,(3\,k^2\,(2\,r_3+r_5)+2\,t_2)}{k\,(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	$-\frac{i\,\sqrt{2}\,(3\,k^2\,(r_3+2\,r_5)+4\,t_3)}{k\,(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$
$\tau^{\#1}_{1^+}\dagger^{\alpha\beta}$	$\frac{i\,\sqrt{2}}{k\,(1+k^2)\,(2\,r_3+r_5)}$	$-\frac{i\,(3\,k^2\,(2\,r_3+r_5)+2\,t_2)}{k\,(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	$\frac{3\,k^2\,(2\,r_3+r_5)+2\,t_2}{(1+k^2)^2\,(2\,r_3+r_5)\,t_2}$	0	0	0	$\frac{6\,k^2\,(r_3+2\,r_5)+8\,t_3}{(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$
$\sigma^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{2}{k^2\,(r_3+2\,r_5)}$	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	0	$-\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$
$\sigma^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$\frac{2\,\sqrt{2}}{k^2\,(1+2\,k^2)\,(r_3+2\,r_5)}$	$\frac{3\,k^2\,(r_3+2\,r_5)+4\,t_3}{(k+2\,k^3)^2\,(r_3+2\,r_5)\,t_3}$	0	$-\frac{i\,\sqrt{2}\,(3\,k^2\,(r_3+2\,r_5)+4\,t_3)}{k\,(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$
$\tau^{\#1}_{1^-}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\tau^{\#2}_{1^-}\dagger^{\alpha}$	0	0	0	$-\frac{4\,i}{k\,(1+2\,k^2)\,(r_3+2\,r_5)}$	$-\frac{i\,\sqrt{2}\,(3\,k^2\,(r_3+2\,r_5)+4\,t_3)}{k\,(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$	0	$\frac{6\,k^2\,(r_3+2\,r_5)+8\,t_3}{(1+2\,k^2)^2\,(r_3+2\,r_5)\,t_3}$

Lagrangian density

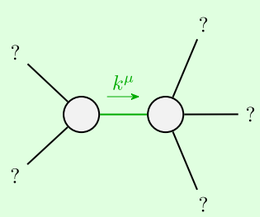
$$\begin{aligned}
&\tfrac{2}{3}\,t_3\,\omega_{\ I}^{\alpha I}\,\omega_{\kappa\alpha}^{\ \ \kappa}+\tfrac{2}{3}\,t_2\,\omega_{\ I}^{\kappa\lambda}\,\omega_{\kappa\lambda}^{\ \ \prime}+\tfrac{1}{3}\,t_2\,\omega_{\kappa\lambda}^{\ \ \prime}\,\omega^{\kappa\lambda}{}_{I}+f^{\alpha\beta}\,\tau_{\alpha\beta}+\\
&\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi}-\tfrac{1}{2}\,r_3\,\partial_I\omega^{\kappa\lambda}{}_{\kappa}\,\partial'\omega_{\lambda\ \alpha}^{\ \alpha}-r_5\,\partial_I\omega^{\kappa\lambda}{}_{\kappa}\,\partial'\omega_{\lambda\ \alpha}^{\ \alpha}+\tfrac{2}{3}\,r_2\,\partial^\beta\omega^{\theta\alpha}{}_{\kappa}\,\partial_\theta\omega_{\alpha\beta}^{\ \ \kappa}-\\
&\tfrac{1}{3}\,r_2\,\partial_\theta\omega_{\alpha\beta}^{\ \ \kappa}\,\partial_\kappa\omega^{\alpha\beta\theta}-\tfrac{2}{3}\,r_2\,\partial_\theta\omega_{\alpha\beta}^{\ \ \kappa}\,\partial_\kappa\omega^{\theta\alpha\beta}+\tfrac{1}{2}\,r_3\,\partial_\alpha\omega_{\lambda\ \theta}^{\ \alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}-\\
&r_5\,\partial_\alpha\omega_{\lambda\ \theta}^{\ \alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda}-\tfrac{1}{2}\,r_3\,\partial_\theta\omega_{\lambda\ \alpha}^{\ \alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda}+r_5\,\partial_\theta\omega_{\lambda\ \alpha}^{\ \alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}-\\
&r_5\,\partial_\alpha\omega_{\lambda\ \theta}^{\ \alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}+r_3\,\partial_\theta\omega_{\lambda\ \alpha}^{\ \alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}+2\,r_5\,\partial_\theta\omega_{\lambda\ \alpha}^{\ \alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta}+\\
&\tfrac{1}{6}\,t_2\,\partial^\alpha f_{\theta\kappa}\,\partial^\kappa f_{\ \alpha}^{\theta}-\tfrac{1}{6}\,t_2\,\partial^\alpha f_{\kappa\theta}\,\partial^\kappa f_{\ \alpha}^{\theta}+\tfrac{1}{6}\,t_2\,\partial^\alpha f^{\lambda}{}_{\kappa}\,\partial^\kappa f_{\lambda\ \theta}^{\ \theta}+\\
&\tfrac{2}{3}\,t_3\,\omega_{\kappa\lambda}^{\ \ \lambda}\,\partial^\kappa f'_{\ I}-\tfrac{4}{3}\,t_3\,\partial^\alpha f_{\kappa\alpha}\,\partial^\kappa f'_{\ I}+\tfrac{2}{3}\,t_3\,\partial_\kappa f^{\lambda}{}_{\lambda}\,\partial^\kappa f'_{\ I}-\\
&\tfrac{2}{3}\,t_2\,\omega_{I\kappa\theta}\,\partial^\kappa f'^{\theta}-\tfrac{1}{3}\,t_2\,\omega_{\theta I\kappa}\,\partial^\kappa f'^{I\theta}+\tfrac{2}{3}\,t_2\,\omega_{\theta\kappa I}\,\partial^\kappa f'^{I\theta}+\\
&\tfrac{2}{3}\,t_3\,\omega_{I\lambda}^{\ \ \lambda}\,\partial^\kappa f'_{\ \kappa}-\tfrac{1}{6}\,t_2\,\partial^\alpha f^{\lambda}{}_{\kappa}\,\partial^\kappa f_{\lambda\alpha}-\tfrac{1}{6}\,t_2\,\partial_\kappa f^{\lambda}{}_{\theta}\,\partial^\kappa f_{\ \lambda}^{\theta}+\\
&\tfrac{2}{3}\,t_3\,\partial^\alpha f^{\lambda}{}_{\alpha}\,\partial^\kappa f_{\lambda\kappa}+\tfrac{1}{3}\,r_2\,\partial_\kappa\omega^{\alpha\beta\theta}\,\partial^\kappa\omega_{\alpha\beta\theta}+\tfrac{2}{3}\,r_2\,\partial_\kappa\omega^{\theta\alpha\beta}\,\partial^\kappa\omega_{\alpha\beta\theta}-\\
&\tfrac{2}{3}\,r_2\,\partial^\beta\omega_{\ I}^{\alpha\lambda}\,\partial_\lambda\omega_{\alpha\beta}^{\ \ \prime}+\tfrac{2}{3}\,r_2\,\partial^\beta\omega_{\ I}^{\lambda\alpha}\,\partial_\lambda\omega_{\alpha\beta}^{\ \ \prime}-4\,r_3\,\partial^\beta\omega_{\ I}^{\lambda\alpha}\,\partial_\lambda\omega_{\alpha\beta}^{\ \ \prime}-\\
&\tfrac{1}{2}\,r_3\,\partial_\alpha\omega_{\lambda\ \theta}^{\ \alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa}+r_5\,\partial_\alpha\omega_{\lambda\ \theta}^{\ \alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa}+\tfrac{1}{2}\,r_3\,\partial_\theta\omega_{\lambda\ \alpha}^{\ \alpha}\,\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	
$\tau^{\#2}_{0^+} == 0$	1
$\tau^{\#1}_{0^+} - 2\,i\,k\,\sigma^{\#1}_{0^+} == 0$	1
$\tau^{\#2\,\alpha}_{1^-} + 2\,i\,k\,\sigma^{\#2\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha}_{1^-} == 0$	3
$\tau^{\#1\,\alpha\beta}_{1^+} + i\,k\,\sigma^{\#2\,\alpha\beta}_{1^+} == 0$	3
$\sigma^{\#1\,\alpha\beta\chi}_{2^-} == 0$	5
$\tau^{\#1\,\alpha\beta}_{2^+} == 0$	5
Total #:	21



Massive particle

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



Quadratic pole

Pole residue:	$-\frac{1}{r_3\,(2\,r_3+r_5)\,(r_3+2\,r_5)\,p^2} > 0$
Polarisations:	2

Unitarity conditions

$$r_2 < 0 \,\&\&\, r_3 < 0 \,\&\&\, r_5 < -\tfrac{r_3}{2} \,\&\&\, t_2 > 0 \,\|\, r_2 < 0 \,\&\&\, r_3 < 0 \,\&\&\, r_5 > -2\,r_3 \,\&\&\, t_2 > 0 \,\|\, r_2 < 0 \,\&\&\, r_3 > 0 \,\&\&\, -2\,r_3 < r_5 < -\tfrac{r_3}{2} \,\&\&\, t_2 > 0$$