	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}\,\dagger$	$\frac{8\,\beta_1}{{\alpha_0}^2-4\,\alpha_0\,\beta_1}$	$-\frac{i\,\sqrt{2}}{\alpha_0\,k}$	0	0
$\tau_{0^+}^{\#1}\,\dagger$	$\frac{i\,\sqrt{2}}{\alpha_0\,k}$	$-\frac{1}{\alpha_0\,k^2}$	0	0
$\tau_{0^+}^{\#2}\,\dagger$	0	0	0	0
$\sigma_{0^-}^{\#1}\,\dagger$	0	0	0	$\frac{2}{\alpha_0-4\,\beta_1+2\,\alpha_3\,k^2}$

	$\sigma_{2^+}^{\#1}{}_{\alpha\beta}$	$\tau_{2^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{16\,\beta_1}{{\alpha_0}^2-4\,\alpha_0\,\beta_1}$	$\frac{2\,i\,\sqrt{2}}{\alpha_0\,k}$	0
$\tau_{2^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{2\,i\,\sqrt{2}}{\alpha_0\,k}$	$\frac{2}{\alpha_0\,k^2}$	0
$\sigma_{2^-}^{\#1}\,\dagger^{\alpha\beta\chi}$	0	0	$\frac{1}{-\frac{\alpha_0}{4}+\beta_1}$

	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{\alpha_0}{4}+\beta_1$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	0
$f_{2^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	$2\,\beta_1\,k^2$	0
$\omega_{2^-}^{\#1}\,\dagger^{\alpha\beta\chi}$	0	0	$-\frac{\alpha_0}{4}+\beta_1$

	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$\frac{2\,i\,\sqrt{2}\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$\frac{2\,\sqrt{2}}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	0	$-\frac{2\,\sqrt{2}}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$	0	$-\frac{4\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$
$\sigma_{1^+}^{\#2}\,\dagger^{\alpha\beta}$	$\frac{2\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$\frac{2}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	0	$-\frac{2}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$	0	$-\frac{2\,i\,\sqrt{2}\,k}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$
$\tau_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$\frac{2\,i\,k^2}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	$\frac{2\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+k^2)}$	0	0	0	$-\frac{4\,i\,k^2}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$
$\sigma_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	$-\frac{2\,\sqrt{2}}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$	0	$\frac{4\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$
$\sigma_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$-\frac{2}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$	0	$\frac{2\,i\,\sqrt{2}\,k}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$
$\tau_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	0	0	0
$\tau_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$\frac{4\,i\,k}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$	0	$-\frac{4\,k^2}{(\alpha_0-4\,\beta_1)\,(1+2\,k^2)}$

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$	$-\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	$-\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$
$\omega_{1^+}^{\#2}\,\dagger^{\alpha\beta}$	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	0	$-\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	0	0
$f_{1^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{2\,\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	$\frac{1}{4}\,(\alpha_0-4\,\beta_1)$	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	$\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$
$\omega_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$\frac{\alpha_0-4\,\beta_1}{2\,\sqrt{2}}$	0	0	0
$f_{1^-}^{\#1}\,\dagger^{\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}\,\dagger^{\alpha}$	0	0	0	$-\frac{1}{2}\,i\,(\alpha_0-4\,\beta_1)\,k$	0	0	0

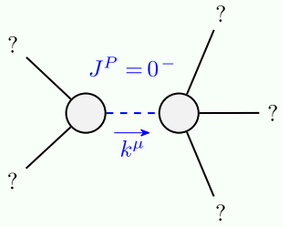
	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}\,\dagger$	$\frac{1}{2}\,(\alpha_0-4\,\beta_1)$	$-\frac{i\,(\alpha_0-4\,\beta_1)\,k}{\sqrt{2}}$	0	0
$f_{0^+}^{\#1}\,\dagger$	$\frac{i\,(\alpha_0-4\,\beta_1)\,k}{\sqrt{2}}$	$-4\,\beta_1\,k^2$	0	0
$f_{0^+}^{\#2}\,\dagger$	0	0	0	0
$\omega_{0^-}^{\#1}\,\dagger$	0	0	0	$\frac{\alpha_0}{2}-2\,\beta_1+\alpha_3\,k^2$

Source constraints

SO(3) irreps	#
$\tau_{0^+}^{\#2} == 0$	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
Total #:	10

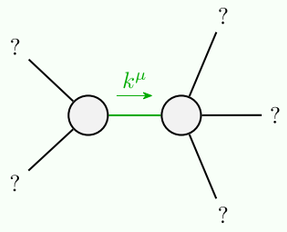
Lagrangian density

$$
\begin{aligned}
&-\tfrac{1}{2}\,\alpha_0\;\omega_{\alpha\chi\beta}\;\omega^{\alpha\beta\chi}-\tfrac{1}{2}\,\alpha_0\;\omega^{\alpha\beta}{}_{\alpha}\;\omega_{\beta}{}^{\chi}{}_{\chi}+2\,\beta_1\;\omega_{\alpha}{}^{\chi\delta}\;\omega_{\chi\delta}{}^{\alpha}+\\
&f^{\alpha\beta}\;\tau_{\alpha\beta}+\omega^{\alpha\beta\chi}\;\sigma_{\alpha\beta\chi}-2\,\beta_1\;\omega_{\alpha}{}^{\chi}{}_{\delta}\;\omega_{\beta}{}^{\delta}{}_{\chi}\;\partial_{\beta}f^{\alpha\beta}-\alpha_0\;f^{\alpha\beta}\;\partial_{\beta}\omega_{\alpha}{}^{\chi}{}_{\chi}+\\
&\alpha_0\;\partial_{\beta}\omega^{\alpha\beta}{}_{\alpha}+\tfrac{2}{3}\,\alpha_3\;\partial^{\alpha}\omega^{\beta\zeta}{}_{\chi}\;\partial_{\beta}\omega_{\zeta\alpha}{}^{\chi}+2\,\beta_1\;\omega_{\beta}{}^{\chi}{}_{\delta}\;\partial^{\beta}f^{\alpha}{}_{\alpha}\;-\\
&2\,\beta_1\;\partial_{\beta}f^{\chi}{}_{\chi}\;\partial^{\beta}f^{\alpha}{}_{\alpha}+\alpha_0\;f^{\alpha\beta}\;\partial_{\chi}\omega_{\alpha}{}^{\chi}{}_{\beta}\;-\tfrac{2}{3}\,\alpha_3\;\partial_{\beta}\omega_{\zeta\alpha}{}^{\chi}\;\partial_{\chi}\omega^{\beta\zeta\alpha}\;-\\
&2\,\beta_1\;\partial_{\beta}\omega_{\zeta\alpha}{}^{\chi}\;\partial_{\chi}\omega^{\zeta\alpha\beta}+4\,\beta_1\;\partial_{\chi}f^{\alpha\beta}\;\partial^{\chi}f^{\alpha}{}_{\alpha}+\beta_1\;\partial_{\chi}f^{\delta}{}_{\beta}\;\partial^{\chi}f_{\delta}{}^{\beta}+\\
&\tfrac{1}{3}\,\alpha_3\;\partial_{\beta}\omega_{\zeta\alpha}{}^{\chi}\;\partial_{\chi}\omega^{\zeta\alpha\beta}+4\,\beta_1\;\omega_{\alpha\chi\beta}\;\partial^{\chi}f^{\alpha\beta}+\beta_1\;\partial_{\chi}f^{\delta}{}_{\beta}\;\partial^{\chi}f_{\delta}{}^{\beta}+\\
&\tfrac{2}{3}\,\alpha_3\;\partial_{\chi}\omega^{\beta\zeta\alpha}\;\partial^{\chi}\omega_{\zeta\alpha\beta}+\tfrac{1}{3}\,\alpha_3\;\partial_{\chi}\omega^{\zeta\alpha\beta}\;\partial^{\chi}\omega_{\zeta\alpha\beta}\;-\\
&\tfrac{2}{3}\,\alpha_3\;\partial^{\beta}\omega_{\alpha}{}^{\zeta\delta}\;\partial_{\delta}\omega_{\zeta\beta}{}^{\alpha}\;-\tfrac{2}{3}\,\alpha_3\;\partial^{\beta}\omega_{\alpha}{}^{\delta\zeta}\;\partial_{\delta}\omega_{\zeta\beta}{}^{\alpha}\;-\\
&2\,\beta_1\;\partial_{\beta}f_{\chi}{}^{\beta}\;\partial_{\delta}f^{\chi\delta}+\tfrac{2}{3}\,\alpha_3\;\partial^{\beta}\omega_{\alpha}{}^{\delta\zeta}\;\partial_{\delta}\omega_{\zeta\beta}{}^{\alpha}\;-\tfrac{2}{3}\,\alpha_3\;\partial^{\zeta}f^{\delta}{}_{\chi}\;\partial_{\zeta}f_{\delta}{}^{\chi}\;+\\
&\beta_1\;\partial^{\chi}f_{\zeta}{}^{\beta}\;\partial^{\zeta}f_{\beta\chi}-\beta_1\;\partial^{\chi}f_{\zeta}{}^{\beta}\;\partial^{\zeta}f_{\chi\beta}+\beta_1\;\partial^{\chi}f_{\delta\zeta}\;\partial^{\zeta}f^{\delta}{}_{\chi}
\end{aligned}
$$



Massive particle

Pole residue:	$-\frac{1}{\alpha_3} > 0$
Polarisations:	1
Square mass:	$-\frac{\alpha_0-4\,\beta_1}{2\,\alpha_3} > 0$
Spin:	0
Parity:	Odd



Quadratic pole

Pole residue:	$\frac{1}{\alpha_0} > 0$
Polarisations:	2

$\alpha_0 > 0$ && $\alpha_3 < 0$ && $\beta_1 < \frac{\alpha_0}{4}$