	$\omega_{0^+}^{\#1}$	$f_{0^+}^{\#1}$	$f_{0^+}^{\#2}$	$\omega_{0^-}^{\#1}$
$\omega_{0^+}^{\#1}\dagger$	0	0	0	0
$f_{0^+}^{\#1}\dagger$	0	$-4\,\beta_1{}^2\,k^2$	0	0
$f_{0^+}^{\#2}\dagger$	0	0	0	0
$\omega_{0^-}^{\#1}\dagger$	0	0	0	k^2

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

	$\sigma_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^+}^{\#2}{}_{\alpha\beta}$	$\tau_{1^+}^{\#1}{}_{\alpha\beta}$	$\sigma_{1^-}^{\#1}{}_{\alpha}$	$\sigma_{1^-}^{\#2}{}_{\alpha}$	$\tau_{1^-}^{\#1}{}_{\alpha}$	$\tau_{1^-}^{\#2}{}_{\alpha}$
$\sigma_{1^+}^{\#1}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\sigma_{1^+}^{\#2}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\tau_{1^+}^{\#1}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\sigma_{1^-}^{\#1}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\sigma_{1^-}^{\#2}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#1}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\tau_{1^-}^{\#2}\dagger^{\alpha}$	0	0	0	0	0	0	0

	$\sigma_{0^+}^{\#1}$	$\tau_{0^+}^{\#1}$	$\tau_{0^+}^{\#2}$	$\sigma_{0^-}^{\#1}$
$\sigma_{0^+}^{\#1}\dagger$	0	0	0	0
$\tau_{0^+}^{\#1}\dagger$	0	$-\frac{1}{4\,\beta_1{}^2\,k^2}$	0	0
$\tau_{0^+}^{\#2}\dagger$	0	0	0	0
$\sigma_{0^-}^{\#1}\dagger$	0	0	0	$\frac{1}{k^2}$

	$\omega_{2^+}^{\#1}{}_{\alpha\beta}$	$f_{2^+}^{\#1}{}_{\alpha\beta}$	$\omega_{2^-}^{\#1}{}_{\alpha\beta\chi}$
$\omega_{2^+}^{\#1}\dagger^{\alpha\beta}$	0	0	0
$f_{2^+}^{\#1}\dagger^{\alpha\beta}$	0	$2\,\beta_1{}^2\,k^2$	0
$\omega_{2^-}^{\#1}\dagger^{\alpha\beta\chi}$	0	0	0

	$\omega_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^+}^{\#2}{}_{\alpha\beta}$	$f_{1^+}^{\#1}{}_{\alpha\beta}$	$\omega_{1^-}^{\#1}{}_{\alpha}$	$\omega_{1^-}^{\#2}{}_{\alpha}$	$f_{1^-}^{\#1}{}_{\alpha}$	$f_{1^-}^{\#2}{}_{\alpha}$
$\omega_{1^+}^{\#1}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\omega_{1^+}^{\#2}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$f_{1^+}^{\#1}\dagger^{\alpha\beta}$	0	0	0	0	0	0	0
$\omega_{1^-}^{\#1}\dagger^{\alpha}$	0	0	0	0	0	0	0
$\omega_{1^-}^{\#2}\dagger^{\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#1}\dagger^{\alpha}$	0	0	0	0	0	0	0
$f_{1^-}^{\#2}\dagger^{\alpha}$	0	0	0	0	0	0	0

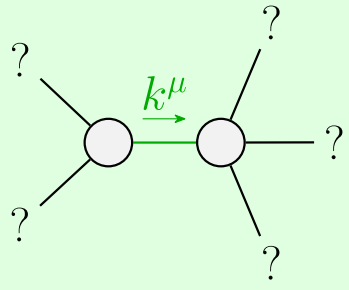
Lagrangian density

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

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

Source constraints

SO(3) irreps	#
$\tau_{0^+}^{\#2} == 0$	1
$\sigma_{0^+}^{\#1} == 0$	1
$\tau_{1^-}^{\#2\,\alpha} == 0$	3
$\tau_{1^-}^{\#1\,\alpha} == 0$	3
$\sigma_{1^-}^{\#2\,\alpha} == 0$	3
$\sigma_{1^-}^{\#1\,\alpha} == 0$	3
$\tau_{1^+}^{\#1\,\alpha\beta} == 0$	3
$\sigma_{1^+}^{\#2\,\alpha\beta} == 0$	3
$\sigma_{1^+}^{\#1\,\alpha\beta} == 0$	3
$\sigma_{2^-}^{\#1\,\alpha\beta\chi} == 0$	5
$\sigma_{2^+}^{\#1\,\alpha\beta} == 0$	5
Total #:	33



Quadratic pole

Pole residue:	$\frac{1}{\beta_1{}^2} > 0$
Polarisations:	2

Unitarity conditions

$\beta_1 < 0 \parallel \beta_1 > 0$

(No massive particles)