

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

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

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

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

### 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

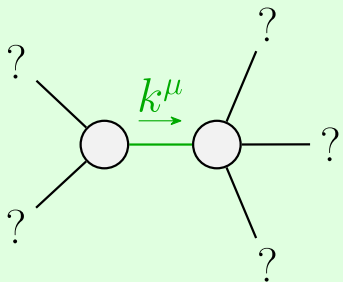
### Lagrangian density

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

Added source term:

$$f^{\alpha\beta} \tau_{\alpha\beta} + \omega^{\alpha\beta\chi} \sigma_{\alpha\beta\chi}$$

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



Quadratic pole

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

Polarisations: 2

Unitarity conditions  
 $\beta_1 < 0 \parallel \beta_1 > 0$

(No massive particles)