

Lagrangian density

$$\begin{aligned} & \omega^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} - \frac{1}{2} r_3 \partial_\lambda \omega^{\kappa\lambda} \partial'_\lambda \omega_\alpha^\alpha - r_5 \partial_\lambda \omega^{\kappa\lambda} \partial'_\lambda \omega_\alpha^\alpha + \frac{1}{2} r_3 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\theta\kappa\lambda} - \\ & r_5 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\theta\kappa\lambda} - \frac{1}{2} r_3 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\theta\kappa\lambda} + r_5 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\theta\kappa\lambda} - \frac{1}{2} r_3 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\kappa\lambda\theta} - \\ & r_5 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\kappa\lambda\theta} + r_3 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\kappa\lambda\theta} + 2 r_5 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\kappa\lambda\theta} - 4 r_3 \partial^\beta \omega_\lambda^\alpha \partial_\alpha \omega_{\beta'}^{\lambda\theta} \omega_{\alpha\beta'} - \\ & \frac{1}{2} r_3 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\theta\kappa} + r_5 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega^{\theta\kappa} + \frac{1}{2} r_3 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\theta\kappa} - r_5 \partial_\theta \omega_\lambda^\alpha \partial_\alpha \omega^{\theta\kappa} \end{aligned}$$

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

$\omega_{2+}^{\#1} \alpha\beta$	0	$\omega_{2-}^{\#1} \alpha\beta\chi$
$\omega_{2-}^{\#1} \alpha\beta\chi$	$-\frac{3k^2 r_3}{2}$	0

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

$\sigma_{2+}^{\#1} \alpha\beta$	0	$\sigma_{2-}^{\#1} \alpha\beta\chi$
$\sigma_{2-}^{\#1} \alpha\beta\chi$	$-\frac{2}{3k^2 r_3}$	0

	$\sigma_{1+}^{\#1} \alpha\beta$	$\sigma_{1+}^{\#2} \alpha\beta$	$\sigma_{1-}^{\#1} \alpha$	$\sigma_{1-}^{\#2} \alpha$
$\sigma_{1+}^{\#1} \alpha\beta$	$\frac{1}{k^2 (2r_3 + r_5)}$	0	0	0
$\sigma_{1+}^{\#2} \alpha\beta$	0	0	0	0
$\sigma_{1-}^{\#1} \alpha$	0	0	$\frac{2}{k^2 (r_3 + 2r_5)}$	0
$\sigma_{1-}^{\#2} \alpha$	0	0	0	0

	$\omega_{1+}^{\#1} \alpha\beta$	$\omega_{1+}^{\#2} \alpha\beta$	$\omega_{1-}^{\#1} \alpha$	$\omega_{1-}^{\#2} \alpha$
$\omega_{1+}^{\#1} \alpha\beta$	$k^2 (2r_3 + r_5)$	0	0	0
$\omega_{1+}^{\#2} \alpha\beta$	0	0	0	0
$\omega_{1-}^{\#1} \alpha$	0	0	$\frac{1}{2} k^2 (r_3 + 2r_5)$	0
$\omega_{1-}^{\#2} \alpha$	0	0	0	0

Source constraints

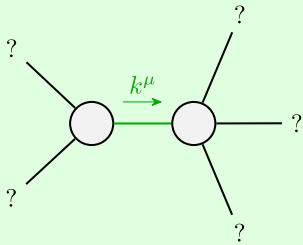
SO(3) irreps	#
$\sigma_{0-}^{\#1} == 0$	1
$\sigma_{0+}^{\#1} == 0$	1
$\sigma_{1-}^{\#2\alpha} == 0$	3
$\sigma_{1+}^{\#2\alpha\beta} == 0$	3
$\sigma_{2-}^{\#1\alpha\beta\chi} == 0$	5
Total #:	13

$$\sigma_{0+}^{\#1} \sigma_{0-}^{\#1}$$

$\sigma_{0+}^{\#1}$	0	0
$\sigma_{0-}^{\#1}$	0	0

$$\omega_{0+}^{\#1} \omega_{0-}^{\#1}$$

$\omega_{0+}^{\#1}$	0	0
$\omega_{0-}^{\#1}$	0	0



Quadratic pole

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

Polarisations: 2

(No massive particles)

Unitarity conditions

$$r_3 < 0 \&\& (r_5 < -\frac{r_3}{2} \parallel r_5 > -2r_3) \parallel r_3 > 0 \&\& -2r_3 < r_5 < -\frac{r_3}{2}$$