

Lagrangian density

$$\begin{aligned} & \omega^{\alpha\beta\chi} \sigma_{\alpha\beta\chi} - r_5 \partial_\lambda \omega_\alpha^\kappa \partial^\lambda \omega_\lambda^\alpha - \frac{2}{3} r_1 \partial^\beta \omega_\kappa^\alpha \partial_\theta \omega_\alpha^\kappa - \frac{2}{3} r_1 \partial_\theta \omega_\alpha^\kappa \partial_\kappa \omega_\alpha^{\beta\theta} + \\ & \frac{2}{3} r_1 \partial_\theta \omega_\alpha^\kappa \partial_\kappa \omega_\alpha^{\beta\theta} - r_5 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega_\lambda^{\theta\kappa\lambda} + r_5 \partial_\theta \omega_\lambda^\alpha \partial_\kappa \omega_\lambda^{\theta\kappa\lambda} - r_5 \partial_\alpha \omega_\lambda^\alpha \partial_\theta \omega_\lambda^{\kappa\lambda\theta} + \\ & 2 r_5 \partial_\theta \omega_\lambda^\alpha \partial_\kappa \omega_\alpha^{\kappa\lambda\theta} + \frac{2}{3} r_1 \partial_\kappa \omega_\alpha^{\beta\theta} \partial^\kappa \omega_{\alpha\beta\theta} - \frac{2}{3} r_1 \partial_\kappa \omega^{\theta\alpha\beta} \partial^\kappa \omega_{\alpha\beta\theta} + \\ & \frac{2}{3} r_1 \partial^\beta \omega_\lambda^\alpha \partial_\lambda \omega_\alpha^{\beta\theta} - \frac{8}{3} r_1 \partial^\beta \omega_\lambda^\alpha \partial_\lambda \omega_{\alpha\beta}^{\theta\lambda} + r_5 \partial_\alpha \omega_\lambda^\alpha \partial^\lambda \omega_\theta^{\theta\kappa} - r_5 \partial_\theta \omega_\lambda^\alpha \partial^\lambda \omega_\alpha^{\theta\kappa} \end{aligned}$$

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
$\sigma_{2^+}^{\#1\alpha\beta} == 0$	5
Total #:	13

	$\omega_{1^+}^{\#1} \alpha\beta$	$\omega_{1^+}^{\#2} \alpha\beta$	$\omega_{1^-}^{\#1} \alpha$	$\omega_{1^-}^{\#2} \alpha$
$\omega_{1^+}^{\#1} \alpha\beta$	$k^2 (2r_1 + r_5)$	0	0	0
$\omega_{1^+}^{\#2} \alpha\beta$	0	0	0	0
$\omega_{1^-}^{\#1} \alpha$	0	0	$k^2 (r_1 + r_5)$	0
$\omega_{1^-}^{\#2} \alpha$	0	0	0	0

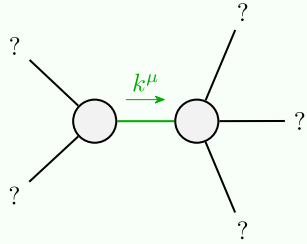
	$\sigma_{1^+}^{\#1} \alpha\beta$	$\sigma_{1^+}^{\#2} \alpha$	$\sigma_{1^-}^{\#1} \alpha$	$\sigma_{1^-}^{\#2} \alpha$
$\sigma_{1^+}^{\#1} \alpha\beta$	$\frac{1}{k^2 (2r_1 + r_5)}$	0	0	0
$\sigma_{1^+}^{\#2} \alpha$	0	0	$\frac{1}{k^2 (r_1 + r_5)}$	0
$\sigma_{1^-}^{\#1} \alpha$	0	0	0	0
$\sigma_{1^-}^{\#2} \alpha$	0	0	0	0

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

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

	$\sigma_{2^+}^{\#1} \alpha\beta$	$\sigma_{2^-}^{\#1} \alpha\beta\chi$
$\sigma_{2^+}^{\#1} \alpha\beta$	0	0
$\sigma_{2^-}^{\#1} \alpha\beta\chi$	0	$\frac{1}{k^2 r_1}$

	$\omega_{2^+}^{\#1} \alpha\beta$	$\omega_{2^-}^{\#1} \alpha\beta\chi$
$\omega_{2^+}^{\#1} \alpha\beta$	0	0
$\omega_{2^-}^{\#1} \alpha\beta\chi$	0	$k^2 r_1$



Quadratic pole

Pole residue: $-\frac{1}{r_1 (r_1 + r_5) (2r_1 + r_5)} > 0$

Polarisations: 2

(No massive particles)

$$r_1 < 0 \&\& (r_5 < -r_1 \parallel r_5 > -2r_1) \parallel r_1 > 0 \&\& -2r_1 < r_5 < -r_1$$