Lagrangian density

$$\omega^{\alpha\beta\chi}\,\sigma_{\alpha\beta\chi} + 2\,r_1\,\partial_l\omega^{\kappa\lambda}{}_{\kappa}{}^{\alpha}\,\partial^l\omega_{\lambda}{}^{\alpha} - 2\,r_3\,\partial_l\omega^{\kappa\lambda}{}_{\kappa}{}^{\alpha}\,\partial^l\omega_{\lambda}{}^{\alpha} -$$
$$r_5\,\partial_l\omega^{\kappa\lambda}{}_{\kappa}{}^{\alpha}\,\partial^l\omega_{\lambda}{}^{\alpha} - \tfrac{2}{3}\,r_1\,\partial^\beta\omega^{\theta\alpha}{}_{\kappa}{}^{\kappa}\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa} - \tfrac{2}{3}\,r_1\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa}\,\partial_\kappa\omega^{\alpha\beta\theta} +$$
$$\tfrac{2}{3}\,r_1\,\partial_\theta\omega_{\alpha\beta}{}^{\kappa}\,\partial_\kappa\omega^{\theta\alpha\beta} - 2\,r_1\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\theta\kappa\lambda} + 2\,r_3\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\theta\kappa\lambda} -$$
$$r_5\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\theta\kappa\lambda} + 2\,r_1\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda} - 2\,r_3\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda} +$$
$$r_5\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\theta\kappa\lambda} + 2\,r_1\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\kappa\lambda\theta} - 2\,r_3\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\kappa\lambda\theta} -$$
$$r_5\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial_\kappa\omega^{\kappa\lambda\theta} - 4\,r_1\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta} + 4\,r_3\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta} +$$
$$2\,r_5\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial_\kappa\omega^{\kappa\lambda\theta} + \tfrac{2}{3}\,r_1\,\partial_\kappa\omega^{\alpha\beta\theta}\,\partial^\kappa\omega_{\alpha\beta\theta} - \tfrac{2}{3}\,r_1\,\partial_\kappa\omega^{\theta\alpha\beta}\,\partial^\kappa\omega_{\alpha\beta\theta} +$$
$$\tfrac{2}{3}\,r_1\,\partial^\beta\omega_{l}{}^{\alpha\lambda}\,\partial_\lambda\omega_{\alpha\beta}{}' + \tfrac{4}{3}\,r_1\,\partial^\beta\omega_{l}{}^{\lambda\alpha}\,\partial_\lambda\omega_{\alpha\beta}{}' - 4\,r_3\,\partial^\beta\omega_{l}{}^{\lambda\alpha}\,\partial_\lambda\omega_{\alpha\beta}{}' +$$
$$2\,r_1\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa} - 2\,r_3\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa} + r_5\,\partial_\alpha\omega_{\lambda}{}^{\alpha}{}_{\theta}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa} -$$
$$2\,r_1\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa} + 2\,r_3\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa} - r_5\,\partial_\theta\omega_{\lambda}{}^{\alpha}{}_{\alpha}\,\partial^\lambda\omega^{\theta\kappa}{}_{\kappa}$$

	$\sigma^{\#1}_{1^+\,\alpha\beta}$	$\sigma^{\#2}_{1^+\,\alpha\beta}$	$\sigma^{\#1}_{1^-\,\alpha}$	$\sigma^{\#2}_{1^-\,\alpha}$
$\sigma^{\#1}_{1^+}{}^{\alpha\beta}$	$\frac{1}{k^2\,(2\,r_3+r_5)}$	0	0	0
$\sigma^{\#2}_{1^+}{}^{\alpha\beta}$	0	0	0	0
$\sigma^{\#1}_{1^-}{}^{\alpha}$	0	0	$\frac{1}{k^2\,(-r_1+2\,r_3+r_5)}$	0
$\sigma^{\#2}_{1^-}{}^{\alpha}$	0	0	0	0

	$\omega^{\#1}_{0^-}$	
$\omega^{\#1}_{0^+}$	$6\,k^2\,(-r_1+r_3)$	0
	0	0

	$\omega^{\#1}_{0^+}{}^{\dagger}$	$\omega^{\#1}_{0^-}{}^{\dagger}$

Source constraints

SO(3) irreps	#
$\sigma^{\#1}_{0^-} == 0$	1
$\sigma^{\#2\,\alpha}_{1^-} == 0$	3
$\sigma^{\#2\,\alpha\beta}_{1^+} == 0$	3
$\sigma^{\#1\,\alpha\beta}_{2^+} == 0$	5
Total #:	12

	$\sigma^{\#1}_{0^+}$	$\sigma^{\#1}_{0^-}$
$\sigma^{\#1}_{0^+}{}^{\dagger}$	$\frac{1}{6\,k^2\,(-r_1+r_3)}$	0
$\sigma^{\#1}_{0^-}{}^{\dagger}$	0	0

	$\omega^{\#1}_{2^+\,\alpha\beta}$	$\omega^{\#1}_{2^-}{}^{\alpha\beta\chi}$
$\omega^{\#1}_{2^+\,\alpha\beta}$	0	$k^2\,r_1$
$\omega^{\#1}_{2^+}{}^{\alpha\beta}{}^{\dagger}$	0	0
$\omega^{\#1}_{2^-}{}^{\alpha\beta\chi}{}^{\dagger}$	$k^2\,r_1$	0

	$\omega^{\#1}_{1^+\,\alpha\beta}$	$\omega^{\#2}_{1^+\,\alpha\beta}$	$\omega^{\#1}_{1^-\,\alpha}$	$\omega^{\#2}_{1^-\,\alpha}$
$\omega^{\#1}_{1^+}{}^{\alpha\beta}{}^{\dagger}$	$k^2\,(2\,r_3+r_5)$	0	0	0
$\omega^{\#2}_{1^+}{}^{\alpha\beta}{}^{\dagger}$	0	0	0	0
$\omega^{\#1}_{1^-}{}^{\alpha}{}^{\dagger}$	0	0	$k^2\,(-r_1+2\,r_3+r_5)$	0
$\omega^{\#2}_{1^-}{}^{\alpha}{}^{\dagger}$	0	0	0	0

	$\sigma^{\#1}_{2^+\,\alpha\beta}$	$\sigma^{\#1}_{2^-}{}^{\alpha\beta\chi}$
$\sigma^{\#1}_{2^+\,\alpha\beta}$	0	$\frac{1}{k^2\,r_1}$
$\sigma^{\#1}_{2^+}{}^{\alpha\beta}{}^{\dagger}$	0	0
$\sigma^{\#1}_{2^-}{}^{\alpha\beta\chi}{}^{\dagger}$	0	0

Unitarity conditions

$$r_1 < 0\;\&\&\;(r_5 < r_1 - 2\,r_3\;||\;r_5 > -2\,r_3)\;||\;r_1 > 0\;\&\&\;-2\,r_3 < r_5 < r_1 - 2\,r_3$$

Quadratic pole

Pole residue:	$\frac{1}{r_1\,(r_1-2\,r_3-r_5)\,(2\,r_3+r_5)} > 0$
Polarisations:	2

(No massive particles)