## Lagrangian density

$$-r_5 \partial_i \omega^{\kappa \lambda}_{\kappa} \partial^i \omega_{\lambda}^{\alpha}_{\alpha} - \frac{2}{3} r_1 \partial^{\beta} \omega^{\theta \alpha}_{\kappa} \partial_{\theta} \omega_{\alpha\beta}^{\kappa} -$$

$$\frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha\beta}^{\quad \kappa} \partial_{\kappa} \omega^{\alpha\beta\theta} + \frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha\beta}^{\quad \kappa} \partial_{\kappa} \omega^{\theta\alpha\beta} - r_5 \partial_{\alpha} \omega_{\lambda}^{\quad \alpha}_{\quad \theta} \partial_{\kappa} \omega^{\theta\kappa\lambda} +$$

$$r_5 \, \partial_\theta \omega_{\lambda}^{\ \alpha}_{\ \alpha} \partial_\kappa \omega^{\theta \kappa \lambda} - r_5 \, \partial_\alpha \omega_{\lambda}^{\ \alpha}_{\ \theta} \partial_\kappa \omega^{\kappa \lambda \theta} + 2 \, r_5 \, \partial_\theta \omega_{\lambda}^{\ \alpha}_{\ \alpha} \partial_\kappa \omega^{\kappa \lambda \theta} +$$

$$\frac{2}{3} r_1 \partial_{\kappa} \omega^{\alpha\beta\theta} \partial^{\kappa} \omega_{\alpha\beta\theta} - \frac{2}{3} r_1 \partial_{\kappa} \omega^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} + \frac{2}{3} r_1 \partial^{\beta} \omega_{i}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}' -$$

$$\frac{8}{3} r_1 \partial^{\beta} \omega_{I}^{\lambda \alpha} \partial_{\lambda} \omega_{\alpha \beta}^{I} + r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa} - r_5 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa}$$

Added source term:  $\omega^{\alpha\beta\chi}$   $\sigma_{\alpha\beta\chi}$ 

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

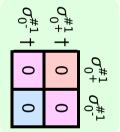
	$\omega_{0}^{\sharp 1}$	$\omega_0^{\#1}$
$\omega_{0}^{\#1}$ †	0	0
$\omega_{0}^{#1}$ †	0	0

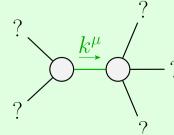
	$\sigma_{2^{+}\alpha\beta}^{\#1}$	$\sigma_{2-\alpha\beta\chi}^{\#1}$
$\sigma_{\scriptscriptstyle 2}^{\scriptscriptstyle \#1}\dagger^{lphaeta}$	0	0
$\sigma_2^{\#1} \dagger^{\alpha\beta\chi}$	0	$\frac{1}{k^2 r_1}$

	$\omega_{2^{+}\alpha\beta}^{\#1}$	$\omega_{2^{-}\alpha\beta\chi}^{\#1}$
$\omega_{2}^{\#1} \dagger^{\alpha\beta}$	0	0
$\omega_2^{\sharp 1}$ † $^{lphaeta\chi}$	0	$k^2 r_1$

_	$\omega_{1^{+}lphaeta}^{\sharp1}$	$\omega_{1}^{\#2}{}_{\alpha\beta}$	$\omega_{1^{-}\alpha}^{\sharp 1}$	$\omega_{1^{-}\alpha}^{\#2}$
$\omega_{1}^{\#1} \dagger^{\alpha\beta}$	$k^2 (2 r_1 + r_5)$	0	0	0
$\omega_{1}^{\#2} \dagger^{\alpha\beta}$	0	0	0	0
$\omega_1^{\sharp 1} \dagger^{lpha}$	0	0	$k^2 \left( r_1 + r_5 \right)$	0
$\omega_1^{\#2} \uparrow^{\alpha}$	0	0	0	0

	$\sigma_{1^{+}lphaeta}^{\sharp1}$	$\sigma_{1^{+}\alpha\beta}^{\#2}$	$\sigma_{1}^{\#1}{}_{lpha}$	$\sigma_{1}^{\#2}{}_{\alpha}$
$\sigma_{1}^{\#1} \dagger^{lphaeta}$	$\frac{1}{k^2(2r_1+r_5)}$	0	0	0
$\sigma_{1}^{\#2} \dagger^{\alpha\beta}$	0	0	0	0
$\sigma_{1}^{\#1}\dagger^{lpha}$	0	0	$\frac{1}{k^2\left(r_1+r_5\right)}$	0
$\sigma_1^{\#2} \dagger^{\alpha}$	0	0	0	0





## Quadratic pole

7 Pole residue:	>0
, Tole residue.	$r_1(r_1+r_5)(2r_1+r_5)$

Polarisations: 2

## Unitarity conditions

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

(No massive particles)