

Lagrangian density

$$\begin{aligned} &\frac{2}{3}t_2\omega_{\lambda'}^{\kappa\lambda}\omega_{\kappa\lambda'}'+\frac{1}{3}t_2\omega_{\kappa\lambda'}^{\lambda}\omega_{\lambda'\kappa}^{\kappa\lambda}+\frac{2}{3}r_2\partial^\beta\omega_{\kappa}^{\theta\alpha}\partial_\theta\omega_{\alpha\beta}^{\kappa-}\\ &\frac{1}{3}r_2\partial_\theta\omega_{\alpha\beta}^{\kappa}\partial_\kappa\omega^{\alpha\beta\theta}-\frac{2}{3}r_2\partial_\theta\omega_{\alpha\beta}^{\kappa}\partial_\kappa\omega^{\theta\alpha\beta}+\frac{1}{6}t_2\partial^\alpha f_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}-\\ &\frac{2}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}-\\ &\frac{2}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}-\\ &\frac{2}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{6}t_2\partial^\alpha f_{\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}+\frac{1}{3}t_2\omega_{\theta\kappa}^{\kappa}f_{\alpha}^{\theta}-\\ &\frac{2}{3}r_2\partial_\kappa\omega^{\theta\alpha\beta}\partial^\kappa\omega_{\alpha\beta\theta}-\frac{2}{3}r_2\partial^\beta\omega_{\alpha\beta}^{\lambda}\partial_\lambda\omega_{\alpha\beta}^{\lambda}+\frac{2}{3}r_2\partial^\beta\omega_{\alpha\beta}^{\lambda}\partial_\lambda\omega_{\alpha\beta}^{\lambda} \end{aligned}$$

Added source term:

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

$\omega_{1+}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1+}^{\#2}\dagger^{\alpha\beta}$	$f_{1+}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1-}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1-}^{\#2}\dagger^{\alpha\beta}$	$f_{1-}^{\#1}\dagger^{\alpha\beta}$	$\omega_{1-}^{\#2}\dagger^{\alpha\beta}$	$f_{1-}^{\#2}\dagger^{\alpha\beta}$
$\frac{2t_2}{3}$	$\frac{\sqrt{2}t_2}{3}$	$\frac{1}{3}i\sqrt{2}kt_2$	0	0	0	0	0
$\frac{\sqrt{2}t_2}{3}$	$\frac{t_2}{3}$	$\frac{ikt_2}{3}$	0	0	0	0	0
$-\frac{1}{3}i\sqrt{2}kt_2$	$-\frac{1}{3}ikt_2$	$\frac{k^2t_2}{3}$	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0

$\sigma_{1+}^{\#1}\dagger^{\alpha\beta}$	$\sigma_{1+}^{\#2}\dagger^{\alpha\beta}$	$\tau_{1+}^{\#1}\dagger^{\alpha\beta}$	$\sigma_{1-}^{\#1}\dagger^{\alpha\beta}$	$\sigma_{1-}^{\#2}\dagger^{\alpha\beta}$	$\tau_{1-}^{\#1}\dagger^{\alpha\beta}$	$\tau_{1-}^{\#2}\dagger^{\alpha\beta}$
$\frac{6}{(3+k^2)^2t_2}$	$\frac{3\sqrt{2}}{(3+k^2)^2t_2}$	$\frac{3i\sqrt{2}k}{(3+k^2)^2t_2}$	0	0	0	0
$\frac{3\sqrt{2}}{(3+k^2)^2t_2}$	$\frac{3}{(3+k^2)^2t_2}$	$\frac{3ik}{(3+k^2)^2t_2}$	0	0	0	0
$-\frac{3i\sqrt{2}k}{(3+k^2)^2t_2}$	$-\frac{3ik}{(3+k^2)^2t_2}$	$\frac{3k^2}{(3+k^2)^2t_2}$	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

Source constraints

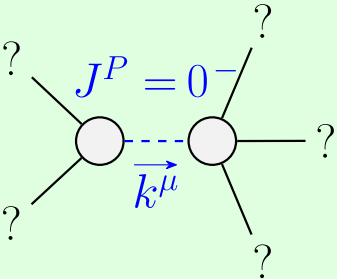
SO(3) irreps	#
$\tau_{0+}^{\#2} == 0$	1
$\tau_{0+}^{\#1} == 0$	1
$\sigma_{0+}^{\#1} == 0$	1
$\tau_{1-}^{\#2\alpha} == 0$	3
$\tau_{1-}^{\#1\alpha} == 0$	3
$\sigma_{1-}^{\#2\alpha} == 0$	3
$\sigma_{1-}^{\#1\alpha} == 0$	3
$\tau_{1+}^{\#1\alpha\beta} + ik\sigma_{1+}^{\#1\alpha\beta} == 0$	3
$\sigma_{1+}^{\#1\alpha\beta} == \sigma_{1+}^{\#2\alpha\beta}$	3
$\sigma_{2-}^{\#1\alpha\beta\chi} == 0$	5
$\tau_{2+}^{\#1\alpha\beta} == 0$	5
$\sigma_{2+}^{\#1\alpha\beta} == 0$	5
Total #:	36

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

$\sigma_{2+}^{\#1}\dagger^{\alpha\beta}$	$\tau_{2+}^{\#1}\dagger^{\alpha\beta}$	$\sigma_{2-}^{\#1}\dagger^{\alpha\beta\chi}$
0	0	0
0	0	0
0	0	0

$\omega_{0+}^{\#1}\dagger$	$f_{0+}^{\#1}\dagger$	$f_{0+}^{\#2}\dagger$	$\omega_{0-}^{\#1}\dagger$
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	$k^2r_2+t_2$

$\sigma_{0+}^{\#1}\dagger$	$\tau_{0+}^{\#1}\dagger$	$\tau_{0+}^{\#2}\dagger$	$\sigma_{0-}^{\#1}\dagger$
0	0	0	0
0	0	0	0
0	0	0	0
0	0	0	$\frac{1}{k^2r_2+t_2}$



Massive particle

Pole residue:	$-\frac{1}{r_2} > 0$
Polarisations:	1
Square mass:	$-\frac{t_2}{r_2} > 0$
Spin:	0
Parity:	Odd

Unitarity conditions

$$r_2 < 0 \ \&\& \ t_2 > 0$$

(No massless particles)