

Lagrangian density

$$\begin{aligned} & -t_1 \omega_{\lambda'}^{\alpha'} \omega_{\kappa\alpha}^{\kappa} \omega_{\kappa\alpha}^{\kappa} - \frac{1}{3} t_1 \omega_{\lambda'}^{\kappa\lambda} \omega_{\kappa\lambda}^{\kappa\lambda} \omega_{\kappa\lambda}^{\kappa\lambda} + \frac{1}{3} t_1 \omega_{\kappa\lambda}^{\kappa\lambda} \omega_{\kappa\lambda}^{\kappa\lambda} \omega_{\kappa\lambda}^{\kappa\lambda} + \\ & 2 r_1 \partial_{\lambda'} \omega_{\kappa}^{\kappa\lambda} \partial' \omega_{\lambda}^{\alpha} \omega_{\alpha}^{\alpha} - \frac{2}{3} r_1 \partial^{\beta} \omega_{\kappa}^{\theta\alpha} \partial_{\theta} \omega_{\alpha}^{\kappa} \omega_{\alpha}^{\kappa} + \frac{2}{3} r_2 \partial^{\beta} \omega_{\kappa}^{\theta\alpha} \partial_{\theta} \omega_{\alpha}^{\kappa} \omega_{\alpha}^{\kappa} - \\ & \frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha}^{\kappa} \partial_{\kappa} \omega_{\alpha}^{\alpha\beta\theta} - \frac{1}{3} r_2 \partial_{\theta} \omega_{\alpha}^{\kappa} \partial_{\kappa} \omega_{\alpha}^{\alpha\beta\theta} + \frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha}^{\kappa} \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} - \\ & \frac{2}{3} r_2 \partial_{\theta} \omega_{\alpha}^{\kappa} \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} + 2 r_1 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\lambda}^{\theta\kappa\lambda} - 2 r_1 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\alpha}^{\theta\kappa\lambda} + \\ & 2 r_1 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \omega_{\lambda}^{\kappa\lambda\theta} - 4 r_1 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega_{\lambda}^{\kappa\lambda\theta} - \frac{1}{3} t_1 \partial^{\alpha} f_{\kappa}^{\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} - \frac{1}{3} t_1 \partial^{\alpha} f_{\theta\kappa}^{\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} - \\ & \frac{2}{3} t_1 \partial^{\alpha} f_{\kappa\theta}^{\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} - \frac{1}{3} t_1 \partial^{\alpha} f_{\lambda}^{\kappa\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} + t_1 \omega_{\kappa\alpha}^{\alpha} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \\ & t_1 \omega_{\kappa\lambda}^{\lambda} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + 2 t_1 \partial^{\alpha} f_{\kappa\alpha}^{\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} - t_1 \partial_{\kappa} f_{\lambda}^{\kappa\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \frac{1}{3} t_1 \omega_{\theta\kappa}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \\ & \frac{4}{3} t_1 \omega_{\lambda\theta}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} - \frac{1}{3} t_1 \omega_{\theta\kappa}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \frac{2}{3} t_1 \omega_{\theta\kappa}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} - t_1 \omega_{\lambda\alpha}^{\alpha} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} - \\ & t_1 \omega_{\lambda}^{\lambda} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \frac{1}{3} t_1 \partial^{\alpha} f_{\lambda}^{\kappa\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} + \frac{1}{3} t_1 \partial_{\kappa} f_{\theta}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} + \\ & \frac{2}{3} t_1 \partial_{\kappa} f_{\theta}^{\lambda\theta} \partial^{\kappa} f_{\lambda}^{\kappa\lambda\theta} - t_1 \partial^{\alpha} f_{\lambda}^{\kappa\lambda\theta} \partial_{\alpha} \omega_{\lambda}^{\kappa\lambda\theta} + \frac{2}{3} r_1 \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} + \\ & \frac{1}{3} r_2 \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} - \frac{2}{3} r_1 \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} + \frac{2}{3} r_2 \partial_{\kappa} \omega_{\alpha}^{\theta\alpha\beta} \partial^{\kappa} \omega_{\alpha\beta\theta} + \\ & \frac{2}{3} r_1 \partial^{\beta} \omega_{\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\kappa} - \frac{2}{3} r_2 \partial^{\beta} \omega_{\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\kappa} - \frac{8}{3} r_1 \partial^{\beta} \omega_{\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\kappa} + \\ & \frac{2}{3} r_2 \partial^{\beta} \omega_{\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\kappa} - 2 r_1 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega_{\theta}^{\theta\kappa} + 2 r_1 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega_{\alpha}^{\theta\kappa} \end{aligned}$$

Added source term:

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

$\sigma_{1+}^{\#1} + \alpha\beta$	$\sigma_{1+}^{\#2} + \alpha\beta$	$\tau_{1+}^{\#1} + \alpha\beta$	$\sigma_{1-}^{\#1} \alpha$	$\sigma_{1-}^{\#2} \alpha$	$\tau_{1-}^{\#1} \alpha$	$\tau_{1-}^{\#2} \alpha$
$\frac{6}{(3+2k^2)^2 t_1}$	$-\frac{6\sqrt{2}}{(3+2k^2)^2 t_1}$	$-\frac{6i\sqrt{2}k}{(3+2k^2)^2 t_1}$	0	0	0	0
$-\frac{6\sqrt{2}}{(3+2k^2)^2 t_1}$	$\frac{12}{(3+2k^2)^2 t_1}$	$\frac{12ik}{(3+2k^2)^2 t_1}$	0	0	0	0
$\frac{6i\sqrt{2}k}{(3+2k^2)^2 t_1}$	$-\frac{12ik}{(3+2k^2)^2 t_1}$	$\frac{12k^2}{(3+2k^2)^2 t_1}$	0	0	0	0
0	0	0	0	$\frac{\sqrt{2}}{t_1+2k^2 t_1}$	0	$\frac{2ik}{t_1+2k^2 t_1}$
0	0	0	$\frac{\sqrt{2}}{t_1+2k^2 t_1}$	$\frac{2k^2 r_1+t_1}{(t_1+2k^2 t_1)^2}$	0	$\frac{i\sqrt{2}k(2k^2 r_1+t_1)}{(t_1+2k^2 t_1)^2}$
0	0	0	0	0	0	0
0	0	0	$-\frac{2ik}{t_1+2k^2 t_1}$	$-\frac{i\sqrt{2}k(2k^2 r_1+t_1)}{(t_1+2k^2 t_1)^2}$	0	$\frac{2k^2(2k^2 r_1+t_1)}{(t_1+2k^2 t_1)^2}$

$\omega_{1+}^{\#1} + \alpha\beta$	$\omega_{1+}^{\#2} + \alpha\beta$	$f_{1+}^{\#1} + \alpha\beta$	$\omega_{1-}^{\#1} \alpha$	$\omega_{1-}^{\#2} \alpha$	$f_{1-}^{\#1} \alpha$	$f_{1-}^{\#2} \alpha$
$\frac{t_1}{6}$	$-\frac{t_1}{3\sqrt{2}}$	$-\frac{ikt_1}{3\sqrt{2}}$	0	0	0	0
$-\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	$\frac{ikt_1}{3}$	0	0	0	0
$\frac{ikt_1}{3\sqrt{2}}$	$-\frac{1}{3}ik t_1$	$\frac{k^2 t_1}{3}$	0	0	0	0
0	0	0	$-k^2 r_1 - \frac{t_1}{2}$	$\frac{t_1}{\sqrt{2}}$	0	$ik t_1$
0	0	0	$\frac{t_1}{\sqrt{2}}$	0	0	0
0	0	0	0	0	0	0
0	0	0	$-ik t_1$	0	0	0

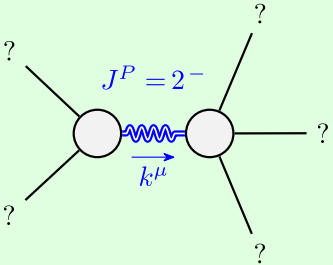
Source constraints	#
$\tau_{0+}^{\#2} == 0$	1
$\tau_{0+}^{\#1} - 2ik \sigma_{0+}^{\#1} == 0$	1
$\tau_{1-}^{\#2\alpha} + 2ik \sigma_{1-}^{\#2\alpha} == 0$	3
$\tau_{1-}^{\#1\alpha} == 0$	3
$\tau_{1+}^{\#1\alpha\beta} - 2ik \sigma_{1+}^{\#1\alpha\beta} == 0$	3
$2 \sigma_{1+}^{\#1\alpha\beta} + \sigma_{1+}^{\#2\alpha\beta} == 0$	3
$\tau_{2+}^{\#1\alpha\beta} - 2ik \sigma_{2+}^{\#1\alpha\beta} == 0$	5
Total #:	19

$\sigma_{0+}^{\#1} +$	$\sigma_{0+}^{\#1}$	$\tau_{0+}^{\#1}$	$\tau_{0+}^{\#2}$	$\sigma_{0-}^{\#1}$
$\sigma_{0+}^{\#1} +$	$-\frac{1}{(1+2k^2)^2 t_1}$	$\frac{i\sqrt{2}k}{(1+2k^2)^2 t_1}$	0	0
$\tau_{0+}^{\#1} +$	$-\frac{i\sqrt{2}k}{(1+2k^2)^2 t_1}$	$-\frac{2k^2}{(1+2k^2)^2 t_1}$	0	0
$\tau_{0+}^{\#2} +$	0	0	0	0
$\sigma_{0-}^{\#1} +$	0	0	0	$\frac{1}{k^2 r_2}$

	$\sigma_{2+}^{\#1} \alpha\beta$	$\tau_{2+}^{\#1} \alpha\beta$	$\sigma_{2-}^{\#1} \alpha\beta\chi$
$\sigma_{2+}^{\#1} \dagger \alpha\beta$	$\frac{2}{(1+2k^2)^2 t_1}$	$-\frac{2i\sqrt{2}k}{(1+2k^2)^2 t_1}$	0
$\tau_{2+}^{\#1} \dagger \alpha\beta$	$\frac{2i\sqrt{2}k}{(1+2k^2)^2 t_1}$	$\frac{4k^2}{(1+2k^2)^2 t_1}$	0
$\sigma_{2-}^{\#1} \dagger \alpha\beta\chi$	0	0	$\frac{2}{2k^2 r_1+t_1}$

$\omega_{0+}^{\#1} +$	$f_{0+}^{\#1}$	$f_{0+}^{\#2}$	$\omega_{0-}^{\#1}$
$\omega_{0+}^{\#1} +$	$-t_1$	$i\sqrt{2}k t_1$	0
$f_{0+}^{\#1} +$	$-i\sqrt{2}k t_1$	$-2k^2 t_1$	0
$f_{0+}^{\#2} +$	0	0	0
$\omega_{0-}^{\#1} +$	0	0	$k^2 r_2$

$\omega_{2+}^{\#1} + \alpha\beta$	$f_{2+}^{\#1} + \alpha\beta$	$\omega_{2-}^{\#1} \alpha\beta\chi$	
$\omega_{2+}^{\#1} + \alpha\beta$	$\frac{t_1}{2}$	$-\frac{ikt_1}{\sqrt{2}}$	0
$f_{2+}^{\#1} + \alpha\beta$	$\frac{ikt_1}{\sqrt{2}}$	$k^2 t_1$	0
$\omega_{2-}^{\#1} + \alpha\beta\chi$	0	0	$k^2 r_1 + \frac{t_1}{2}$



Massive particle	
Pole residue:	$-\frac{1}{r_1} \gg 0$
Polarisations:	5
Square mass:	$-\frac{t_1}{2r_1} \gg 0$
Spin:	2
Parity:	Odd

$r_1 < 0 \ \& \ t_1 > 0$

Unitarity conditions

(No massless particles)