

$\omega_{1+}^{\#1} + \alpha\beta$	$\omega_{1+}^{\#2} + \alpha\beta$	$f_{1+}^{\#1} + \alpha\beta$	$\omega_{1-}^{\#1} - \alpha$	$\omega_{1-}^{\#2} - \alpha$	$f_{1-}^{\#1} - \alpha$	$f_{1-}^{\#2} - \alpha$
$\omega_{1+}^{\#1} + \alpha\beta$	$k^2 r_5 - \frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{i k t_1}{\sqrt{2}}$	0	0	0
$\omega_{1+}^{\#2} + \alpha\beta$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0
$f_{1+}^{\#1} + \alpha\beta$	$\frac{i k t_1}{\sqrt{2}}$	0	0	0	0	0
$\omega_{1-}^{\#1} + \alpha$	0	0	$k^2 r_5 + \frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	$\frac{i k t_1}{3}$
$\omega_{1-}^{\#2} + \alpha$	0	0	$\frac{t_1}{3\sqrt{2}}$	$\frac{t_1}{3}$	0	$\frac{1}{3} i \sqrt{2} k t_1$
$f_{1-}^{\#1} + \alpha$	0	0	0	0	0	0
$f_{1-}^{\#2} + \alpha$	0	0	$-\frac{1}{3} i k t_1$	$-\frac{1}{3} i \sqrt{2} k t_1$	0	$\frac{2 k^2 t_1}{3}$

$\omega_0^{\#1} +$	$f_0^{\#1} +$	$f_0^{\#2} +$	$\omega_0^{\#1} -$
$\omega_0^{\#1} +$	0	0	0
$f_0^{\#1} +$	0	0	0
$f_0^{\#2} +$	0	0	0
$\omega_0^{\#1} -$	0	0	$k^2 r_2 - t_1$

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

$\sigma_{-0}^{\#1}$	$\sigma_{-0}^{\#2}$	$\sigma_{-0}^{\#1}$	$\sigma_{-0}^{\#2}$	$\sigma_{-0}^{\#1}$
0	0	0	0	$\frac{1}{k^2 r_2 - t_1}$
$\sigma_{-0}^{\#1}$	0	0	0	0
$\sigma_{-0}^{\#2}$	0	0	0	0
$\sigma_{-0}^{\#1}$	0	0	0	0
$\sigma_{-0}^{\#2}$	0	0	0	0

Lagrangian density

$$\begin{aligned}
 & -\frac{1}{3} t_1 \omega_{,\alpha}^{\alpha} \omega_{,\kappa\alpha}^{\kappa} \omega_{,\kappa\lambda}^{\kappa\lambda} \omega_{,\kappa\lambda}^{\kappa\lambda} - r_5 \partial_{,\lambda} \omega_{,\kappa\lambda}^{\kappa\lambda} \omega_{,\lambda}^{\alpha} + \frac{2}{3} r_2 \partial^{\beta} \omega^{\theta\alpha} \omega_{,\kappa} \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} - r_5 \partial_{\alpha} \omega_{,\lambda}^{\alpha} \partial_{\theta} \omega^{\theta\kappa\lambda} - \\
 & r_5 \partial_{\theta} \omega_{,\lambda}^{\alpha} \partial_{\kappa} \omega^{\theta\kappa\lambda} - r_5 \partial_{\alpha} \omega_{,\lambda}^{\alpha} \partial_{\theta} \omega^{\kappa\lambda\theta} + 2 r_5 \partial_{\theta} \omega_{,\lambda}^{\alpha} \partial_{\kappa} \omega^{\kappa\lambda\theta} - \\
 & \frac{1}{2} t_1 \partial^{\alpha} f_{\theta\kappa} \partial^{\kappa} f_{\alpha}^{\theta} - \frac{1}{2} t_1 \partial^{\alpha} f_{\kappa\theta} \partial^{\kappa} f_{\alpha}^{\theta} - \frac{1}{2} t_1 \partial^{\alpha} f_{\alpha}^{\lambda} \partial^{\kappa} f_{\kappa\lambda}^{\alpha} + \\
 & \frac{1}{3} t_1 \omega_{,\kappa\alpha}^{\alpha} \partial^{\kappa} f_{,\lambda}^{\lambda} + \frac{1}{3} t_1 \omega_{,\kappa\lambda}^{\lambda} \partial^{\kappa} f_{,\lambda}^{\lambda} + \frac{2}{3} t_1 \partial^{\alpha} f_{\kappa\alpha} \partial^{\kappa} f_{,\lambda}^{\lambda} - \frac{1}{3} t_1 \partial_{\kappa} f_{\lambda}^{\lambda} \partial^{\kappa} f_{,\lambda}^{\lambda} + \\
 & 2 t_1 \omega_{,\kappa\theta} \partial^{\kappa} f_{,\lambda}^{\lambda} - \frac{1}{3} t_1 \omega_{,\lambda\alpha}^{\alpha} \partial^{\kappa} f_{\kappa}^{\lambda} - \frac{1}{3} t_1 \omega_{,\lambda\alpha}^{\lambda} \partial^{\kappa} f_{\kappa}^{\lambda} + \frac{1}{2} t_1 \partial^{\alpha} f_{\lambda}^{\lambda} \partial^{\kappa} f_{\kappa\lambda}^{\alpha} + \\
 & \frac{1}{2} t_1 \partial_{\kappa} f_{\theta}^{\lambda} \partial^{\kappa} f_{\lambda}^{\theta} + \frac{1}{2} t_1 \partial_{\kappa} f_{\theta}^{\lambda} \partial^{\kappa} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \partial^{\alpha} f_{\lambda}^{\lambda} \partial^{\kappa} f_{\kappa\lambda}^{\alpha} + \\
 & \frac{1}{3} r_2 \partial_{\kappa} \omega^{\alpha\beta\theta} \partial^{\kappa} \omega_{\alpha\beta\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_{,\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\alpha} + \\
 & \frac{2}{3} r_2 \partial^{\beta} \omega_{,\lambda}^{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta}^{\alpha} + r_5 \partial_{\alpha} \omega_{,\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta\kappa} - r_5 \partial_{\theta} \omega_{,\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta\kappa}
 \end{aligned}$$

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

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

Source constraints	#
SO(3) irreps	
$\tau_{0+}^{\#2} == 0$	1
$\tau_{0+}^{\#1} == 0$	1
$\sigma_{0+}^{\#1} == 0$	1
$\tau_{1-}^{\#2\alpha} + 2 i k \sigma_{1-}^{\#2\alpha} == 0$	3
$\tau_{1-}^{\#1\alpha} == 0$	3
$\tau_{1+}^{\#1\alpha\beta} + i k \sigma_{1+}^{\#2\alpha\beta} == 0$	3
$\tau_{2+}^{\#1\alpha\beta} - 2 i k \sigma_{2+}^{\#1\alpha\beta} == 0$	5
Total #:	17

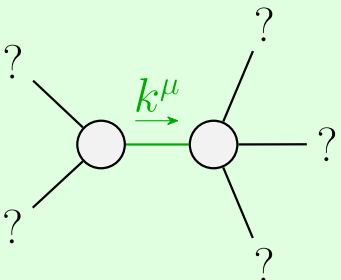
Unitarity conditions

$$r_2 < 0 \ \&\& \ r_5 < 0 \ \&\& \ t_1 < 0$$

Quadratic pole

Pole residue: $-\frac{1}{r_5 t_1^2} > 0$

Polarisations: 2



Massive particle

Pole residue: $-\frac{1}{r_2} > 0$

Polarisations: 1

Square mass: $\frac{t_1}{r_2} > 0$

Spin: 0

Parity: Odd

