$\sigma_{1}^{\#1}{}_{lpha}$ $\sigma_{1}^{\#2}{}_{lpha}$ $ au_{1}^{\#2}{}_{lpha}$	0 0 0	0 0 0	0 0 0	$\frac{2(t_1+t_3)}{3+2k^2r_5(t_1+t_3)} \qquad -\frac{\sqrt{2}(t_1-2t_3)}{(1+2k^2)(3t_1t_3+2k^2r_5(t_1+t_3))} \qquad 0 \qquad \frac{2ik(t_1-2t_3)}{(1+2k^2)(3t_1t_3+2k^2r_5(t_1+t_3))}$	$\frac{\sqrt{2} (t_1 - 2t_3)}{(1 + 2 k^2)(3t_1t_3 + 2 k^2 r_5 (t_1 + t_3))} \frac{6k^2 r_5 + t_1 + 4t_3}{(1 + 2 k^2)^2 (3t_1t_3 + 2 k^2 r_5 (t_1 + t_3))}  0  \frac{i \sqrt{2} k (6k^2 r_5 + t_1 + 4t_3)}{(1 + 2 k^2)^2 (3t_1t_3 + 2 k^2 r_5 (t_1 + t_3))}$	0 0 0	$2ik(t_1-2t_3) \qquad i\sqrt{2}k(6k^2r_5+t_1+4t_3) \qquad 2k^2(6k^2r_5+t_1+4t_3)$
$\sigma_{1}^{\#1}{}_{\alpha}$	0	0	0	$\frac{2(t_1+t_3)}{3t_1t_3+2k^2r_5(t_1+t_3)}$	$\frac{\sqrt{2} (t_1 - 2t_3)}{2 k^2 (3t_1 t_3 + 2k^2 r_5 (t_1))}$	0	$2 i k (t_1 - 2 t_3)$
$\tau_{1}^{\#1}{}_{\alpha\beta}$	$-\frac{i\sqrt{2}k}{t_1+k^2t_1}$	$-\frac{i(2k^3r_5-kt_1)}{(1+k^2)^2t_1^2}$	$\frac{-2k^4r_5+k^2t_1}{(1+k^2)^2t_1^2}$	0	0	0	O
$\sigma_{1}^{\#2}{}_{lphaeta}$	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{-2k^2r_5+t_1}{(1+k^2)^2t_1^2}$	$\frac{i(2k^3r_5-kt_1)}{(1+k^2)^2t_1^2}$	0	0	0	0
$\sigma_{1}^{\#1}{}_{\alpha\beta}$	0	$\frac{\sqrt{2}}{t_1 + k^2 t_1}$	$\frac{i\sqrt{2}k}{t_1+k^2t_1}$	0	0	0	С

	$\omega_{1^{+}lphaeta}^{\sharp1}$	$\omega_{1}^{\#2}{}_{lphaeta}$	$f_{1}^{\#1}{}_{\alpha\beta}$	$\omega_{1^{-}lpha}^{\sharp 1}$	$\omega_{1-lpha}^{\#2}$	$f_{1}^{\#1}{}_{\alpha}$	$f_{1}^{#2}\alpha$
$\omega_{1}^{\#1}\dagger^{lphaeta}$	$k^2 r_5 - \frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{ikt_1}{\sqrt{2}}$	0	0	0	0
$\omega_{1}^{\#2}\dagger^{\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f_{1+}^{\#1}\dagger^{\alpha\beta}$	$\frac{ikt_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega_1^{\sharp 1} \dagger^{lpha}$	0	0	0	$\frac{1}{6} \left( 6  k^2  r_5 + t_1 + 4  t_3 \right)$	$\frac{t_1 - 2t_3}{3\sqrt{2}}$	0	$\frac{1}{3}$ <i>i k</i> ( $t_1$ - 2 $t_3$ )
$\omega_1^{#2} \dagger^{\alpha}$	0	0	0	$\frac{t_1-2t_3}{3\sqrt{2}}$	$\frac{t_1+t_3}{3}$	0	$\frac{1}{3}\bar{l}\sqrt{2}k(t_1+t_3)$
$f_{1}^{#1} \dagger^{\alpha}$	0	0	0	0	0	0	0
$f_{1}^{#2} \dagger^{\alpha}$	0	0	0	$-\frac{1}{3}ik(t_1-2t_3)$	$-\frac{1}{3}\bar{l}\sqrt{2}k(t_1+t_3)$	0	$\frac{2}{3}k^2(t_1+t_3)$

	$\omega_0^{\sharp 1}$	$f_{0+}^{\#1}$	$f_{0}^{#2}$	$\omega_0^{\#1}$
$\omega_{0^+}^{\#1}\dagger$	$t_3$	$-i \sqrt{2} kt_3$	0	0
$f_{0}^{#1}\dagger$	$i \sqrt{2} kt_3$	$2k^2t_3$	0	0
$f_{0}^{#2} \dagger$	0	0	0	0
$\omega_{0}^{\#1}$ †	0	0	0	$k^2 r_2 - t_1$

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

 $-\frac{ikt_1}{\sqrt{2}}$ 

 $k^2 t_1$ 

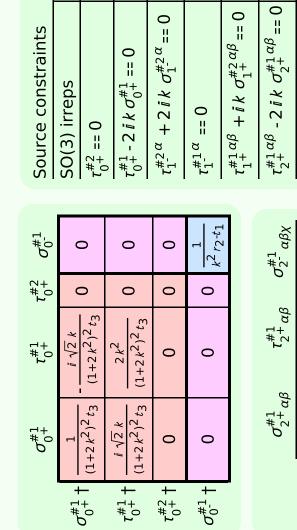
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<u>t</u>1 2

Lagrangian density	$-\frac{1}{3}t_{1}\omega_{\alpha}^{\alpha\prime\prime}\omega_{\kappa\alpha}^{\kappa} + \frac{2}{3}t_{3}\omega_{\alpha}^{\alpha\prime}\omega_{\kappa\alpha}^{\kappa} - t_{1}\omega_{\kappa}^{\kappa\lambda}\omega_{\kappa\lambda}^{\prime} - r_{5}\partial_{\imath}\omega_{\kappa\lambda}^{\kappa\lambda}\partial_{\imath}\omega_{\lambda}^{\alpha} + \frac{2}{3}r_{2}\partial_{\theta}\omega_{\alpha\beta}^{\kappa} - \frac{1}{3}r_{2}\partial_{\theta}\omega_{\alpha\beta}^{\kappa}\partial_{\kappa}\omega^{\alpha\beta\theta} - \frac{2}{3}r_{2}\partial_{\theta}\omega_{\alpha\beta}^{\kappa}\partial_{\kappa}\omega^{\theta\alpha\beta} - \frac{2}{3}r_{2}\partial_{\theta}\omega^{\alpha\beta}\partial_{\kappa}\omega^{\beta}\partial_{$	$r_{5} \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{\theta k \lambda} + r_{5} \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{\theta k \lambda} - r_{5} \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{k \lambda \theta} +$ $2 r_{5} \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{k \lambda \theta} - \frac{1}{2} t_{1} \partial^{\alpha} f_{\theta k} \partial^{k} f_{\alpha}^{\theta} - \frac{1}{2} t_{1} \partial^{\alpha} f_{\kappa \theta} \partial^{k} f_{\alpha}^{\theta} -$ $\frac{1}{2} t_{1} \partial^{\alpha} f^{\lambda} \partial^{k} f_{\alpha \lambda} + \frac{1}{3} t_{1} \omega_{\kappa}^{\alpha} \partial^{k} f'_{\mu} - \frac{2}{3} t_{3} \omega_{\kappa}^{\alpha} \partial^{k} f'_{\mu} + \frac{1}{3} t_{1} \omega_{\kappa}^{\lambda} \partial^{k} f'_{\mu} -$	$\frac{2}{3}t_3 \omega_{\kappa\lambda}{}^{\lambda} \partial^{\kappa} f'_{1} + \frac{2}{3}t_1 \partial^{\alpha} f_{\kappa\alpha} \partial^{\kappa} f'_{1} - \frac{4}{3}t_3 \partial^{\alpha} f_{\kappa\alpha} \partial^{\kappa} f'_{1} - \frac{1}{3}t_1 \partial_{\kappa} f^{\lambda} \partial^{\kappa} f'_{1} +$ $\frac{2}{3}t_3 \partial_{\kappa} f^{\lambda} \partial^{\kappa} f'_{1} + 2t_1 \omega_{1\kappa\theta} \partial^{\kappa} f'^{1\theta} - \frac{1}{3}t_1 \omega_{1\alpha}{}^{\alpha} \partial^{\kappa} f'_{1\kappa} + \frac{2}{3}t_3 \omega_{1\alpha}{}^{\alpha} \partial^{\kappa} f'_{1\kappa} -$ $\frac{1}{3}t_{1} \omega_{1\lambda} \partial^{\kappa} f'_{1} + 2t_{2} \omega_{1\lambda} \partial^{\kappa} f'_{1} + 2t_{2} \partial^{\kappa} f'_{1} + 2t$	$\frac{1}{3} t_1 \omega_{i\lambda} \partial_{\lambda} f_{\lambda} + \frac{1}{3} t_3 \omega_{i\lambda} \partial_{\lambda} f_{\lambda} + \frac{1}{2} t_1 \partial_{\lambda} f_{\lambda} + \frac{1}{2} t_1 \partial_{\lambda} f_{\lambda} + \frac{1}{2} t_1 \partial_{\alpha} f_{\lambda} + \frac{1}{3} t_2 \partial_{\alpha} f_{\lambda} \partial_{\lambda} f_{\lambda} + \frac{1}{3} t_2 \partial_{\alpha} f_{\lambda} \partial_{\lambda} f_{\lambda} + \frac{1}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial^{\beta} \omega_{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial^{\beta} \omega_{\alpha\lambda} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta\theta} - \frac{2}{3} t_2 \partial_{\beta} \omega_{\alpha\beta} \partial_{\lambda} \omega_{\alpha\beta} + \frac{2}{3} t_2 \partial_{\alpha} \omega_{\alpha\beta} \partial_{\alpha}$	$\frac{2}{3} r_2 \partial^{\beta} \omega_{,}^{\lambda \alpha} \partial_{\lambda} \omega_{\alpha \beta}^{\ \prime} + r_5 \partial_{\alpha} \omega_{\lambda}^{\ \alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\ \kappa} - r_5 \partial_{\theta} \omega_{\lambda}^{\ \alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\ \kappa}$
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**ω** ω

$\sigma_{2^{-}}^{\#1}\alpha\beta\chi$	0	0	$\frac{2}{t_1}$
$\tau_2^{\#1}_+\alpha\beta$	$-\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	$\frac{4k^2}{(1+2k^2)^2t_1}$	0
$\sigma_{2}^{\#1}{}_{\alpha\beta}$	$\frac{2}{(1+2k^2)^2t_1}$	$\frac{2 i \sqrt{2} k}{(1+2 k^2)^2 t_1}$	0
·	$\sigma_{2}^{\#1} + \alpha \beta$	$\tau_{2}^{\#1} + ^{\alpha\beta}$	$\sigma_{2^-}^{\#1} +^{lphaeta\chi}$

 $\omega_2^{\sharp 1} \dagger^{\alpha\beta\chi}$ 

Massive particle			
Pole residue:	$\frac{6t_1t_3(t_1+t_3)\cdot 3r_5(t_1^2+2t_3^2)}{2r_5(t_1+t_3)(\cdot 3t_1t_3+r_5(t_1+t_3))} >$		
Polarisations:	3		
Square mass:	$-\frac{3t_1t_3}{2r_5t_1+2r_5t_3} > 0$		
Spin:	1		
Parity:	Odd		
•	Pole residue: Polarisations: Square mass: Spin:		

? $J^P = 0$ ?	
$? \frac{\overline{k^{\mu}}}{?}$	?

Massive particle				
Pole residue:	$-\frac{1}{r_2} > 0$			
Polarisations:	1			
Square mass:	$\frac{t_1}{r_2} > 0$			
Spin:	0			
Parity:	Odd			