$ au_1^{\#2}$	0	0	0	$-\frac{2ikt_1-4ikt_3}{3t_1t_3+6k^2t_1t_3}$	$\frac{i\sqrt{2}k(t_1+4t_3)}{3(1+2k^2)^2t_1t_3}$	0	$\frac{2k^2(t_1+4t_3)}{3(1+2k^2)^2t_1t_3}$
$\tau_{1}^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\sigma_{1^{-}lpha}^{\#2}$	0	0	0	$-\frac{\sqrt{2} (t_1 - 2t_3)}{3(1 + 2k^2)t_1t_3}$	$\frac{t_1+4t_3}{3(1+2k^2)^2t_1t_3}$	0	$-\frac{i\sqrt{2}k(t_1+4t_3)}{3(1+2k^2)^2t_1t_3}$
$\sigma_{1^{+}\alpha}^{\#1}$	0	0	0	$\frac{2(t_1+t_3)}{3t_1t_3}$	$-\frac{\sqrt{2} (t_1-2t_3)}{3(1+2k^2)t_1t_3}$	0	$\frac{2ikt_1-4ikt_3}{3t_1t_3+6k^2t_1t_3}$
$\tau_1^{\#1}{}_+\alpha\beta$	$-\frac{i\sqrt{2}k}{t_1+k^2t_1}$	$\frac{ik}{(1+k^2)^2t_1}$	$\frac{k^2}{(1+k^2)^2t_1}$	0	0	0	0
$\sigma_{1}^{\#2}$	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{1}{(1+k^2)^2 t_1}$	$-\frac{ik}{(1+k^2)^2t_1}$	0	0	0	0
$\sigma_1^{\#1}{}_+\alpha\beta$	0	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{i\sqrt{2}k}{t_1+k^2t_1}$	0	0	0	0
	$\sigma_1^{\#1} + \alpha \beta$	$\sigma_{1}^{#2} + \alpha \beta$	$\tau_1^{\#1} + \alpha \beta$	$\left.\sigma_{1^{ ext{-}}}^{\#1} +^{lpha} ight $	$\sigma_{1}^{\#2} +^{lpha}$	$\tau_{1}^{\#1} +^{\alpha}$	$\tau_{1}^{#2} + ^{\alpha}$

					(2)		
$f_{1}^{\#2}$	0	0	0	$\frac{1}{3}$ i k (t <sub>1</sub> - 2 t <sub>3</sub> )	$\frac{1}{3}\bar{l}\sqrt{2}k(t_1+t_3)$	0	$\frac{2}{3} k^2 (t_1 + t_3)$
$f_{1^-}^{\#1} \alpha$	0	0	0	0	0	0	0
$\omega_{1^{-}\alpha}^{\#2}$	0	0	0	$\frac{t_1-2t_3}{3\sqrt{2}}$	$\frac{t_1+t_3}{3}$	0	$-\frac{1}{3}\bar{l}k(t_1-2t_3)\left -\frac{1}{3}\bar{l}\sqrt{2}k(t_1+t_3)\right $
$\omega_{1^{^{-}}\alpha}^{\#1}$	0	0	0	$\frac{1}{6}(t_1+4t_3)$	$\frac{t_1-2t_3}{3\sqrt{2}}$	0	$-\frac{1}{3}ik(t_1-2t_3)$
$f_{1}^{\#1}$	$-\frac{ikt_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1}^{\#1}_{+}\omega_{1}^{\#2}_{+}\omega_{1}^{\#1}_{+}_{lphaeta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega_{1}^{\#1}{}_{+}\alpha_{\beta}$	- <u>t1</u>	$-\frac{t_1}{\sqrt{2}}$	$\frac{ikt_1}{\sqrt{2}}$	0	0	0	0
	$\omega_{1}^{\#1} + ^{lphaeta}$	$\omega_1^{\#2} + ^{lphaeta}$	$f_{1}^{#1} + ^{\alpha \beta}$	$\omega_{1}^{\#1} +^{\alpha}$	$\omega_{1}^{\#2} +^{lpha}$	$f_{1}^{\#1} \dagger^{lpha}$	$f_{1}^{#2} + \alpha$

$^{\kappa}_{g}$	κ <sub>f'</sub> - <sub>'</sub> -	'f' +			$\sigma_{2^{-}}^{\#1}{}_{lphaeta\chi}$	0	0	$\frac{2}{t_1}$
$r_2 \partial^{\beta} \omega^{\theta \alpha}_{\kappa} \partial_{\alpha}$	$-rac{2}{3}t_1\partial^{lpha}\!f_{\kappalpha}\dot{\partial}^{\kappa}$	$\frac{2}{3}t_3\omega_{I\lambda}^{\lambda}\partial^{\mu}_{-}$	$^{lpha_{etaeta}}_{eta}+$		$\tau_{2}^{\#1}_{+\alpha\beta}$	$-\frac{2i\sqrt{2}k}{(1+2k^2)^2t_1}$	$\frac{4k^2}{(1+2k^2)^2t_1}$	0
$-\frac{1}{3}t_{1} \omega_{\kappa}^{\alpha'} \omega_{\kappa\alpha}^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}t_{3} \omega_{\kappa}^{\alpha'} \omega_{\kappa\alpha}^{\ \ \ \ \ \ \ \ \ } + t_{1} \omega_{\kappa\lambda}^{\ \ \ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}r_{2} \partial_{\beta}\omega_{\alpha\beta}^{\ \ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}r_{2} \partial_{\beta}\omega_{\alpha\beta}^{\ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}r_{2} \partial_{\beta}\omega_{\alpha\beta}^{\ \ \ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}r_{2} \partial_{\beta}\omega_{\alpha\beta}^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ } + \frac{2}{3}r_{2} \partial_{\beta}\omega_{\alpha\beta}^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $	$\frac{1}{2}t_{1}\partial^{\alpha}f_{\kappa\theta}\partial^{\kappa}f_{\alpha}^{\ \theta} - \frac{1}{2}t_{1}\partial^{\alpha}f^{\lambda}_{\ \kappa}\partial^{\kappa}f_{\alpha\lambda} + \frac{1}{3}t_{1}\omega_{\kappa\alpha}^{\ \alpha}\partial^{\kappa}f'_{\ r} - \frac{2}{3}t_{3}\omega_{\kappa\alpha}^{\ \lambda}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{1}\partial^{\alpha}f_{\kappa\alpha}\partial^{\kappa}f'_{\ r} - \frac{2}{3}t_{3}\omega_{\kappa\lambda}^{\ \lambda}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{1}\partial^{\alpha}f_{\kappa\alpha}\partial^{\kappa}f'_{\ r} - \frac{4}{3}t_{1}\partial_{\kappa}f^{\lambda}_{\ \lambda}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{3}\partial_{\kappa}f^{\lambda}_{\ \lambda}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{1}\omega_{\kappa\alpha}^{\ \alpha}\partial^{\kappa}f'_{\ r} - \frac{2}{3}t_{1}\partial_{\kappa}f^{\lambda}_{\ r}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{2}\partial_{\kappa}f^{\lambda}_{\ r}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{1}\omega_{\kappa\alpha}^{\ \alpha}\partial^{\kappa}f'_{\ r} - \frac{2}{3}t_{1}\partial_{\kappa}f'_{\ r}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{2}\partial_{\kappa}f'_{\ r}\partial^{\kappa}f'_{\ r}\partial^{\kappa}f'_{\ r} + \frac{2}{3}t_{1}\partial^{\kappa}f'_{\ r}\partial^{\kappa}f'_{\ r}\partial^{\kappa}f'_$	$\frac{1}{3}t_{1}\omega_{,\alpha}^{\alpha}\partial^{k}f_{'}+\frac{2}{3}t_{3}\omega_{,\alpha}^{\alpha}\partial^{k}f_{'}-\frac{1}{3}t_{1}\omega_{,\lambda}^{\lambda}\partial^{k}f_{'}+\frac{2}{3}t_{3}\omega_{,\lambda}^{\lambda}\partial^{k}f_{'}+\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda\alpha}+\frac{1}{2}t_{1}\partial_{k}f_{\theta}^{\lambda}\partial^{k}f_{\lambda}^{\beta}+\frac{1}{2}t_{1}\partial_{k}f^{\lambda}_{\theta}\partial^{k}f_{\lambda}^{\beta}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda\alpha}+\frac{1}{2}t_{1}\partial_{k}f_{\theta}^{\lambda}\partial^{k}f_{\lambda}^{\beta}+\frac{1}{2}t_{1}\partial_{k}f^{\lambda}_{\theta}\partial^{k}f_{\lambda}^{\beta}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda\alpha}+\frac{1}{2}t_{1}\partial_{k}f_{\theta}^{\lambda}\partial^{k}f_{\lambda}^{\beta}+\frac{1}{2}t_{1}\partial_{k}f^{\lambda}_{\theta}\partial^{k}f_{\lambda}^{\beta}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda\alpha}+\frac{1}{2}t_{1}\partial_{k}f_{\theta}^{\lambda}\partial^{k}f_{\lambda}^{\beta}+\frac{1}{2}t_{1}\partial_{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\beta}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}+\frac{1}{2}t_{1}\partial_{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda}^{\lambda}-\\ \frac{1}{2}t_{1}\partial^{\alpha}f_{\lambda}^{\lambda}\partial^{k}f_{\lambda$	$\frac{1}{3}t_1\partial^{\alpha}f^{\lambda}_{\ \alpha}\partial^{\kappa}f_{\lambda\kappa} + \frac{2}{3}t_3\partial^{\alpha}f^{\lambda}_{\ \alpha}\partial^{\kappa}f_{\lambda\kappa} + \frac{1}{3}r_2\partial_{\kappa}\omega^{\mu\rho\sigma}\partial^{\kappa}\omega_{\alpha\beta\theta} + \frac{2}{3}r_2\partial^{\beta}\omega^{\mu\lambda}\partial_{\lambda}\omega_{\alpha\beta} + \frac{2}{3}r_2\partial^{\kappa}\omega_{\alpha\beta\theta} - \frac{2}{3}r_2\partial^{\beta}\omega^{\mu\lambda}\partial_{\lambda}\omega_{\alpha\beta} + \frac{2}{3}r_2\partial^{\beta}\omega^{\mu\lambda}\partial_{\lambda}\omega_{\alpha\beta} + \frac{2}{3}r_2\partial^{\beta}\omega^{\mu\lambda}\partial_{\lambda}\omega_{\alpha\beta} + \frac{2}{3}r_2\partial^{\beta}\omega^{\mu\lambda}\partial_{\lambda}\omega_{\alpha\beta} + \frac{2}{3}r_2\partial_{\kappa}\omega_{\alpha\beta} +$	$\sigma_{lphaeta\chi}$	$\sigma_{2}^{\#1}{}_{\alpha\beta}$	$\frac{2}{(1+2k^2)^2t_1}$	$\frac{2 i \sqrt{2} k}{(1+2 k^2)^2 t_1}$	0
$\omega_{\kappa lpha}^{ \kappa} - t_1  \omega_{\mu}^{}$ $\omega_{\kappa lpha}^{ \kappa} - t_2  \omega_{\mu}^{}$	$f_{\alpha\lambda}^{k} + \frac{1}{3}t_{1}$ $f_{\beta}^{k} + \frac{2}{3}t_{3} \omega$ $f_{\beta}^{k} + \frac{2}{3}t_{3} \partial_{k}$	$\frac{1}{3}$ $3^{k}f'_{k} - \frac{1}{3}t_{1}u$ $0^{k}f_{\lambda}^{\theta} + \frac{1}{2}t_{1}$	$\partial^{k} f_{\lambda k} + \frac{1}{3} r_{\beta}$	Added source term: $\left f^{a\beta} \;  au_{a\beta} + \omega^{aeta\chi} \; \sigma_{aeta\chi} ight $		$\sigma_{2}^{*1} + \alpha^{\beta}$	$\tau_{2}^{#1} + \alpha \beta$	$\sigma_{2}^{\#1} +^{lphaeta\chi}$
$\omega_{\alpha'}^{\alpha\prime}$ $r_2 \partial_{\theta} \omega$	$\partial^{\alpha} f^{\lambda}_{\kappa} c \ \omega_{\kappa\lambda}^{\lambda} c \$	$\omega_{I\alpha}^{lpha}\zeta$	$r_2 \partial^{\alpha} f^{\Lambda} $	$\left  f^{\alpha\beta} \right $		(	$\sigma_{0}^{\#1}$	τ
$(+\frac{2}{3}t_{\overline{3}})^{\alpha\beta\theta}$	$\frac{1-\frac{1}{2}}{2}t_{1}$ $+\frac{1}{3}t_{1}$ $-\frac{1}{2}t_{1}\hat{c}$	$\frac{3}{15} + \frac{1}{15} = \frac{1}{15} $	$(+\frac{2}{3}t)$	term:	$\sigma_{0^+}^{\#1}$	+l —	1 2 2	$-\frac{i}{(1+2)^{2}}$ $\frac{2}{(1+2)^{2}}$
$\omega_{\kappa\alpha}^{\kappa}$	$\frac{\partial^{k} f_{\alpha}}{\partial^{k} f'}$	$\partial^{k} f'_{k}$	$^{\alpha}\partial^{\kappa}f_{\lambda\kappa}$ $^{\alpha\beta}\partial^{\kappa}u$	ource	$\sigma_{0^{+}}^{\#1}$ $\tau_{0^{+}}^{\#1}$ $\tau_{0^{+}}^{\#2}$ $\sigma_{0^{-}}^{\#1}$	$+ \frac{i}{(1+2)}$	$\frac{\sqrt{2} k^2)^2 t_3}{\sqrt{2} k}$ $\frac{\sqrt{2} k}{2 k^2)^2 t_3}$ $0$	<u>2</u> (1+2
$\frac{1}{\partial_{ heta}\omega_{lpha}}^{lpha}$	$\partial^{\alpha} f_{\kappa \ell}$ $\omega_{\kappa \alpha}^{\ c}$	$\omega_{\alpha}^{\alpha}$ $\partial^{\alpha}f^{\lambda}$	$\partial^{\alpha} f^{\lambda}$	ed so	$\tau_{0+}^{\#2}$	†	0	
$-\frac{1}{3}\frac{t}{t}$	14 3 12 2 14 14 14 14 14 14 14 14 14 14 14 14 14	2   t   t   t   t   t   t   t   t   t	1 t <sub>1</sub> 3 t <sub>1</sub> 3 t <sub>2</sub> 3 t <sub>2</sub>	Add	$\sigma_0^{\#1}$	t	0	

Lagrangian density

	$\sigma_0^{\#1}$	$ au_{0}^{\#1}$	$\tau_{0}^{\#2}$	$\sigma_0^{\#1}$
$\sigma_{0^{+}}^{#1}$ †	$\frac{1}{(1+2k^2)^2t_3}$	$-\frac{i\sqrt{2} k}{(1+2k^2)^2 t_3}$	0	0
$\tau_{0}^{\#1}$ †	$\frac{i \sqrt{2} k}{(1+2k^2)^2 t_3}$	$\frac{2k^2}{(1+2k^2)^2t_3}$	0	0
$\tau_{0}^{\#2}$ †	0	0	0	0
$\sigma_{0}^{\#1}$ †	0	0	0	$\frac{1}{k^2 r_2 - t_1}$

 $\omega_{0}^{\#1}$ 

 $f_{0}^{#2}$ 

 $\omega_{0}^{\#1}$ 

0

0

 $-i\sqrt{2}kt_3$ 

*t*<sup>3</sup>

0

0

 $2 k^2 t_3$ 

 $i\sqrt{2}~kt_3$ 

0

0

0

0

0

0

0

$f_{0+}^{#1}$ $f_{0+}^{#2}$ $\omega_{0-}^{#1}$		$\omega_{0}^{*_{1}}$	C	$\omega_2^{#1}$ † $^{lphaeta\chi}$		0		0	<u>t</u> 1 2	
$\sigma_0^{\sharp 1}$			#	1	1	3	8	<u> </u> ന	2	16
0		ints			0	0 == χ		0 == <sub>β</sub> ;	$\alpha\beta$ == 0	
0		rce constraints	sd		$-2ik\sigma_{0+}^{\#1}=0$	$^{\alpha}+2ik\ \sigma_{1}^{\#2}{}^{\alpha}$		$+ik \sigma_{1}^{\#2}\alpha\beta$	$-2ik \sigma_{2}^{\#1}\alpha\beta$	
0		se co	3) irreps	0 ==	2 iko	+2 į	0 ==	3 + 1/2		:#  e
1		$\subseteq$	3	l ii	' '	×	×	$\alpha\beta$	$\alpha\beta$	<u></u>

 $\omega_{2}^{\#1} \dagger^{\alpha\beta}$ 

 $f_{2+}^{\#1}\dagger^{\alpha\beta}$ 

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

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

 $k^2 t_1$ 

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

	Massive particle				
? '!	Pole residue:	$-\frac{1}{r_2} > 0$			
$\frac{3}{2}$	Polarisations:	1			
$\vec{k}^{\mu}$	Square mass:	$\frac{t_1}{r_2} > 0$			
?	Spin:	0			
·	Parity:	Odd			

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

0.	0 '	0.	0									
$\frac{1}{2k^2)^2t_3}$	$-\frac{\sqrt{2} k}{(1+2k^2)^2 t_3}$	0	0	nts			0	α == 0		$\alpha\beta$ == 0	$\alpha\beta == 0$	
$\frac{\sqrt{2} k}{2 k^2)^2 t_3}$	$\frac{2k^2}{(1+2k^2)^2t_3}$	0	0	constraints	sd		$\sigma_{0}^{\#1} == 0$	$\sigma_{1}^{\#2}$		$k \ \sigma_1^{\# 2 \ \alpha}$	$k \sigma_{2}^{\#1}$	
0	0	0	0		irre	0	īλ	+ 2 i	0 ==	+ 1	- 2 ji	:#
0	0	0	$\frac{1}{k^2 r_2 - t_1}$	Source	50(3)	$\tau_{0}^{\#2} ==$	$\tau_{0}^{\#1}$ - 2	$t_1^{\#2\alpha}$	$t_{1}^{\#1}\alpha$	$\tau_1^{\#1}{}^{\alpha\beta}$	$\tau_2^{\#1}{}^{\alpha\beta}$	Total