Lagrangian density
$-t_1\;\omega_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{_{$
$2r_1\partial_i\omega^{\kappa\lambda}_{\kappa}\partial^i\omega_{\alpha}^{\alpha} - \frac{2}{3}r_1\partial^\beta\omega^{\theta\alpha}_{\alpha}\partial_\theta\omega_{\beta}^{\kappa} + \frac{2}{3}r_2\partial^\beta\omega^{\theta\alpha}_{\alpha}\partial_\theta\omega_{\beta}^{\kappa} -$
$\frac{2}{3} r_1 \partial_\theta \omega_{\alpha\beta}^{ \ \ \kappa} \partial_\kappa \omega^{\alpha\beta\theta} - \frac{1}{3} r_2 \partial_\theta \omega_{\alpha\beta}^{ \ \kappa} \partial_\kappa \omega^{\alpha\beta\theta} + \frac{2}{3} r_1 \partial_\theta \omega_{\alpha\beta}^{ \ \kappa} \partial_\kappa \omega^{\theta\alpha\beta} -$
$\frac{2}{3} r_2 \partial_\theta \omega_{\alpha\beta}^{} \partial_\kappa \omega^{\theta\alpha\beta} + 2 r_1 \partial_\alpha \omega_{\lambda}^{\alpha} \partial_\kappa \omega^{\theta\kappa\lambda} - 2 r_1 \partial_\theta \omega_{\lambda}^{\alpha} \partial_\kappa \omega^{\theta\kappa\lambda} +$
$2 r_1 \partial_\alpha \omega_\lambda^{\ \alpha} \partial_\kappa \omega^{\kappa\lambda\theta} - 4 r_1 \partial_\theta \omega_\lambda^{\ \alpha} \partial_\kappa \omega^{\kappa\lambda\theta} - \frac{1}{3} t_1 \partial^\alpha f_{\theta\kappa} \partial^\kappa f_\alpha^{\ \theta} -$
$rac{2}{3} t_1 \partial^{lpha} f_{\kappa heta} \partial^{\kappa} f_{lpha}^{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $
$t_1\;\omega_{\kappa\lambda}^{\;\;\lambda}\;\partial^{\kappa}f'_{\;\;\prime}+2t_1\partial^{lpha}f_{\;\kappalpha}\;\partial^{\kappa}f'_{\;\;\prime}-t_1\partial_{\kappa}f^{\lambda}_{\;\;\lambda}\partial^{\kappa}f'_{\;\;\prime}+rac{1}{3}t_1\;\omega_{_{ert} heta\kappa}\;\partial^{\kappa}f'^{_{ert} heta}+$
$rac{4}{3} t_1 \; \omega_{_{/K} heta} \; \partial^{_{K}} f^{' heta} - rac{1}{3} t_1 \; \omega_{ heta_{!K}} \; \partial^{_{K}} f^{' heta} + rac{2}{3} t_1 \; \omega_{ heta_{K'}} \; \partial^{_{K}} f^{' heta} - t_1 \; \omega_{_{/\alpha}} \; \partial^{_{K}} f^{'}_{_{K'}} -$
$t_1\;\omega_{\prime\lambda}^{\;\;\lambda}\;\partial^\kappa f'_{\;\;\kappa}+rac{1}{3}t_1\partial^\alpha f^\lambda_{\;\;\kappa}\partial^\kappa f_{\;\lambdalpha}+rac{1}{3}t_1\partial_\kappa f_{\;\; heta}^{\;\;\lambda}\partial^\kappa f_\lambda^{\;\; heta}+$
$\frac{2}{3}t_{1}\partial_{\kappa}f^{\lambda}_{\ \ \theta}\partial^{\kappa}f_{\lambda}^{\ \ \theta}-t_{1}\partial^{\alpha}f^{\lambda}_{\ \ \alpha}\partial^{\kappa}f_{\lambda\kappa}+\frac{2}{3}r_{1}\partial_{\kappa}\omega^{\alpha\beta\theta}\partial^{\kappa}\omega_{\alpha\beta\theta}+$
$rac{1}{3} r_2 \partial_\kappa \omega^{lphaeta heta} \partial^\kappa \omega_{lphaeta heta}^{-rac{2}{3}} r_1 \partial_\kappa \omega^{ hetalphaeta} \partial^\kappa \omega_{lphaeta heta}^{+rac{2}{3}} r_2 \partial_\kappa \omega^{ hetalphaeta} \partial^\kappa \omega_{lphaeta heta}^{+}$
$rac{2}{3} r_1 \partial^{eta} \omega_{}^{lpha \lambda} \partial_{\lambda} \omega_{lpha eta}^{\prime} - rac{2}{3} r_2 \partial^{eta} \omega_{}^{lpha \lambda} \partial_{\lambda} \omega_{lpha eta}^{\prime} - rac{8}{3} r_1 \partial^{eta} \omega_{}^{\lambda lpha} \partial_{\lambda} \omega_{lpha eta}^{\prime} +$
$rac{2}{3}r_{2}\partial^{eta}\omega_{,}{}^{\lambdalpha}\partial_{\lambda}\omega_{lphaeta}^{\prime}-2r_{1}\partial_{lpha}\omega_{\lambda}^{lpha}\partial^{\lambda}\omega^{eta\kappa}_{\kappa}+2r_{1}\partial_{eta}\omega_{\lambda}^{lpha}\partial^{\lambda}\omega^{eta\kappa}_{\kappa}$
Added source term: $\left f^{lphaeta} \ au_{lphaeta} + \omega^{lphaeta\chi} \ \sigma_{lphaeta\chi} ight $

					<u>1</u>)		~J
$\tau_{1}^{\#2}{}_{\alpha}$	0	0	0	$\frac{2ik}{t_1 + 2k^2t_1}$	$\frac{i\sqrt{2}}{(t_1+2k^2t_1)^2}$	0	$\frac{2k^2(2k^2r_1+t_1)}{(t_1+2k^2t_1)^2}$
$\tau_{1}^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\sigma_{1}^{\#2}{}_{lpha}$	0	0	0	$\frac{\sqrt{2}}{t_1 + 2k^2t_1}$	$\frac{2k^2r_1+t_1}{(t_1+2k^2t_1)^2}$	0	$-\frac{i\sqrt{2}k(2k^2r_1+t_1)}{(t_1+2k^2t_1)^2}$
$\sigma_{1}^{\#1}{}_{\alpha}$	0	0	0	0	$\frac{\sqrt{2}}{t_1 + 2k^2t_1}$	0	$-\frac{2ik}{t_1+2k^2t_1}$
${\tau_1^{\#1}}^{+}\alpha\beta$	$-\frac{6i\sqrt{2}k}{(3+2k^2)^2t_1}$	$\frac{12ik}{(3+2k^2)^2t_1}$	$\frac{12k^2}{(3+2k^2)^2t_1}$	0	0	0	0
$\sigma_{1}^{\#2}{}_{\alpha\beta}$	$-\frac{6\sqrt{2}}{(3+2k^2)^2t_1}$	$\frac{12}{(3+2k^2)^2t_1}$	$-\frac{12ik}{(3+2k^2)^2t_1}$	0	0	0	0
$\sigma_{1}^{\#1}{}_{\alpha\beta}$		$-\frac{6\sqrt{2}}{(3+2k^2)^2t_1}$	$\frac{6i\sqrt{2}k}{(3+2k^2)^2t_1}$	0	0	0	0
	$\sigma_{1}^{\#1} + \alpha^{eta}$	$\sigma_{1}^{#2} + \alpha^{\beta}$	$\tau_{1}^{\#1} + \alpha \beta$	$\sigma_{1}^{\#1} +^{\alpha}$	$\sigma_{1}^{\#2} +^{lpha}$	$\tau_{1}^{\#1} +^{\alpha}$	$\tau_{1}^{\#2} + ^{\alpha}$

<u> </u> :	1 #	П	м	<u>ش</u>	m	м ц	7 0
Source constraints	SO(3) irreps $\tau_{0+}^{\#2} == 0$	$\tau_{0+}^{\#1} - 2 i k \sigma_{0+}^{\#1} == 0$	$\tau_{1}^{\#2}{}^{\alpha} + 2 i k \sigma_{1}^{\#2}{}^{\alpha} == 0$	$t_1^{\#1}{}^{\alpha} == 0$	$\tau_1^{\#1}\alpha^{\beta} - 2ik \sigma_1^{\#1}\alpha^{\beta} == 0$	$2 \sigma_1^{\#1} \sigma + \sigma_1^{\#2} \sigma = 0$ $\pi^{\#1} \sigma \beta \text{if } \sigma^{\#1} \sigma \beta = 0$	${}^{(2+)}_{2} = 2^{1} \times O_{2} + \cdots = 0$
$f_{1^-}^{\#2}$	0	0	0	$i k t_1$	0	0	0
$f_{1^{-}\alpha}^{\#1}$	0	0	0	0	0	0	0
$\omega_{1^{-}\alpha}^{\#2} f_{1^{-}\alpha}^{\#1} f_{1^{-}\alpha}^{\#2}$	0	0	0	$\frac{t_1}{\sqrt{2}}$. 0	0	0
$\omega_{1^{^{-}}\alpha}^{\#1}$	0	0	0	$-k^2 r_1 - \frac{t_1}{2}$	\frac{t_1}{\sqrt{2}}	0	$-ikt_1$
$f_{1}^{\#1}{}_{\alpha\beta}$	$-\frac{ikt_1}{3\sqrt{2}}$	<u>i kt1</u> 3	$\frac{k^2 t_1}{3}$	0	0	0	0
$\alpha \beta \omega_{1}^{\#2} + \alpha \beta f_{1}^{\#1}$	$-\frac{t_1}{3\sqrt{2}}$	4 <u>1</u>	$-\frac{1}{3}$ \bar{l} kt_1	0	0	0	0
$\omega_1^{\#1}{}_+\alpha\beta$	9 <u>1</u> 7	$-\frac{t_1}{3\sqrt{2}}$	$\frac{i k t_1}{3 \sqrt{2}}$	0	0	0	0
	$\omega_1^{\#1} + ^{lphaeta}$	$\omega_1^{\#2} + \alpha \beta$	$f_1^{#1} + \alpha \beta$	$ u_{1}^{\#1} + \alpha $	$\omega_{1}^{\#2} +^{\alpha}$	$f_{1}^{#1} + \alpha$	$f_{1}^{#2} +^{\alpha}$

10	19	$\omega_{0^{\text{-}}}^{\#1}$	0	0	0	$k^2 r_2$	
== 0 2		$f_{0}^{\#2}$	0	0	0	0	
$-2ik \ \sigma_2^{*1}\alpha^{\beta} =$		$f_{0}^{\#1}$	$i\sqrt{2}kt_1$	$-2 k^2 t_1$	0	0	
$ au_2^{\#1} \alpha \beta - 2i$	Total #:	$\omega_0^{\#1}$	-t ₁	$-i\sqrt{2}kt_1$	0	0	
			$\omega_{0}^{\#1}\dagger$	$f_{0}^{\#1}$ †	$f_0^{#2} \uparrow$	$\omega_{0}^{\#1} \dotplus$	

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

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

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

	Massive particl	е
? $J^P = 2^-$?	Pole residue:	$-\frac{1}{r_1} > 0$
7	Polarisations:	5
k^{μ}	Square mass:	$-\frac{t_1}{2r_1} > 0$
?	Spin:	2
	Parity:	Odd

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

(No massless particles)