$\tau_{1^{-}\alpha}^{\#2}$	0	0	0	$-\frac{i}{k(1+2k^2)(r_1+r_5)}$	$\frac{i(6k^2(r_1+r_5)+t_1)}{\sqrt{2}k(1+2k^2)^2(r_1+r_5)t_1}$	0	$\frac{6 k^2 (r_1 + r_5) + t_1}{(1 + 2 k^2)^2 (r_1 + r_5) t_1}$
$\tau_{1}^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\sigma_{1}^{\#2}{}_{lpha}$	0	0	0	$-\frac{1}{\sqrt{2} (k^2 + 2k^4) (r_1 + r_5)}$	$\frac{6k^2(r_1+r_5)+t_1}{2(k+2k^3)^2(r_1+r_5)t_1}$	0	$-\frac{i(6k^2(r_1+r_5)+t_1)}{\sqrt{2}k(1+2k^2)^2(r_1+r_5)t_1}$
$\sigma_{1}^{\#1}{}_{\alpha}$	0	0	0	$\frac{1}{k^2 \left(r_1 + r_5 \right)}$	$-\frac{1}{\sqrt{2} \; (k^2 + 2 k^4) (r_1 + r_5)}$	0	$\frac{i}{k(1+2k^2)(r_1+r_5)}$
$\tau_{1}^{\#1}{}_{\alpha\beta}$	$-\frac{i\sqrt{2}k}{t_1+k^2t_1}$	$\frac{-2ik^3(2r_1+r_5)+ikt_1}{(1+k^2)^2t_1^2}$	$\frac{-2k^4(2r_1+r_5)+k^2t_1}{(1+k^2)^2t_1^2}$	0	0	0	0
$\sigma_{1}^{\#2}{}_{\alpha\beta}$	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\frac{-2k^2(2r_1+r_5)+t_1}{(1+k^2)^2t_1^2}$	$\frac{i(2k^3(2r_1+r_5)\cdot kt_1)}{(1+k^2)^2t_1^2}$	0	0	0	0
$\sigma_1^{\#1}{}_+\alpha\beta$	0	$-\frac{\sqrt{2}}{t_1+k^2t_1}$	$\int_{1}^{\#1} + \alpha \beta \frac{i \sqrt{2} k}{t_1 + k^2 t_1}$	0	0	0	0
	$_{1}^{#1}$ $\dagger^{\alpha\beta}$	$_{1}^{#2}$ $+ \alpha \beta$	$_{\mathrm{L}}^{\sharp}+\alpha ^{lpha eta }$	$\sigma_{1}^{\#1} + \alpha$	$\sigma_{1}^{\#2} + \alpha$	$ au_1^{\#_1} + ^lpha$	$\tau_{1}^{\#2} + \alpha$

$\sigma_{0^{\bar{-}}}^{\#1}$	0	0	0	$-\frac{1}{t_1}$
$\tau_0^{\#2}$	0	0	0	0
$\tau_0^{\#1}$	0	0	0	0
$\sigma_{0}^{\#1}$	0	0	0	0
	+	+	+	+
	$\sigma_{0}^{\#1}$	${oldsymbol{\tau}_0^\#}_1^1$	$t_0^{\#_2^2}$	$\sigma_{0}^{\#1}$

$\omega_{0^{\text{-}}}^{\#1}$	0	0	0	<i>-t</i> ₁	
$f_{0}^{\#2}$	0	0	0	0	
$f_{0}^{\#1}$	0	0	0	0	
$\omega_{0}^{\#1}$	0	0	0	0	
•	$\omega_{0}^{\#1}\dagger$	$f_0^{#1}$ †	$f_0^{\#2} +$	$\omega_{0}^{\#1}\dagger$	

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

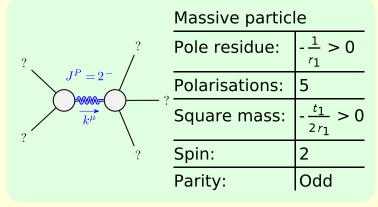
Lagrangian density

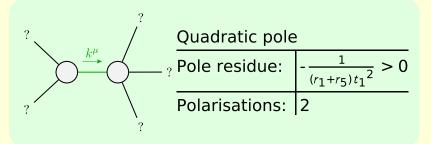
$-\frac{1}{3}t_1 \omega_i^{\alpha i} \omega_{\kappa \alpha}^{\kappa} - t_1 \omega_i^{\kappa \lambda} \omega_{\kappa \lambda}^{i} + f^{\alpha \beta} \tau_{\alpha \beta} + \omega^{\alpha \beta \chi} \sigma_{\alpha \beta \chi} - r_5 \partial_i \omega_{\kappa}^{\kappa \lambda} \partial^i \omega_{\lambda}^{\alpha} -$
$\frac{2}{3} r_1 \partial^{\beta} \omega^{\theta \alpha}_{\kappa} \partial_{\theta} \omega_{\alpha \beta}^{\kappa} - \frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha \beta}^{\kappa} \partial_{\kappa} \omega^{\alpha \beta \theta} + \frac{2}{3} r_1 \partial_{\theta} \omega_{\alpha \beta}^{\kappa} \partial_{\kappa} \omega^{\theta \alpha \beta} -$
$r_5 \partial_{\alpha} \omega_{\lambda \ \theta}^{\ \alpha} \partial_{\kappa} \omega^{\theta \kappa \lambda} + r_5 \partial_{\theta} \omega_{\lambda \ \alpha}^{\ \alpha} \partial_{\kappa} \omega^{\theta \kappa \lambda} - r_5 \partial_{\alpha} \omega_{\lambda \ \theta}^{\ \alpha} \partial_{\kappa} \omega^{\kappa \lambda \theta} + 2 r_5 \partial_{\theta} \omega_{\lambda \ \alpha}^{\ \alpha} \partial_{\kappa} \omega^{\kappa \lambda \theta} -$
$\frac{1}{2} t_1 \partial^{\alpha} f_{\theta \kappa} \partial^{\kappa} f_{\alpha}^{\theta} - \frac{1}{2} t_1 \partial^{\alpha} f_{\kappa \theta} \partial^{\kappa} f_{\alpha}^{\theta} - \frac{1}{2} t_1 \partial^{\alpha} f_{\kappa} \partial^{\kappa} f_{\alpha \lambda} + \frac{1}{3} t_1 \omega_{\kappa \alpha}^{\alpha} \partial^{\kappa} f_{\alpha}^{\prime} +$
$\frac{1}{3} t_1 \omega_{\kappa\lambda}^{\lambda} \partial^{\kappa} f'_{,} + \frac{2}{3} t_1 \partial^{\alpha} f_{\kappa\alpha} \partial^{\kappa} f'_{,} - \frac{1}{3} t_1 \partial_{\kappa} f^{\lambda}_{\lambda} \partial^{\kappa} f'_{,} + 2 t_1 \omega_{,\kappa\theta} \partial^{\kappa} f^{,\theta} -$
$\frac{1}{3} t_1 \omega_{I\alpha}^{\alpha} \partial^{\kappa} f_{\kappa}^{I} - \frac{1}{3} t_1 \omega_{I\lambda}^{\lambda} \partial^{\kappa} f_{\kappa}^{I} + \frac{1}{2} t_1 \partial^{\alpha} f_{\kappa}^{\lambda} \partial^{\kappa} f_{\lambda\alpha} + \frac{1}{2} t_1 \partial_{\kappa} f_{\theta}^{\lambda} \partial^{\kappa} f_{\lambda}^{\theta} +$
$\frac{1}{2} t_1 \partial_{\kappa} f^{\lambda}_{\theta} \partial^{\kappa} f_{\lambda}^{\theta} - \frac{1}{3} t_1 \partial^{\alpha} f^{\lambda}_{\alpha} \partial^{\kappa} f_{\lambda \kappa} + \frac{2}{3} r_1 \partial_{\kappa} \omega^{\alpha \beta \theta} \partial^{\kappa} \omega_{\alpha \beta \theta} - \frac{2}{3} r_1 \partial_{\kappa} \omega^{\theta \alpha \beta} \partial^{\kappa} \omega_{\alpha \beta \theta} +$
$\frac{2}{3} r_1 \partial^{\beta} \omega_{I}^{\alpha \lambda} \partial_{\lambda} \omega_{\alpha \beta}^{I} - \frac{8}{3} r_1 \partial^{\beta} \omega_{I}^{\lambda \alpha} \partial_{\lambda} \omega_{\alpha \beta}^{I} + r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha}{}_{\theta} \partial^{\lambda} \omega_{\kappa}^{\theta \kappa} - r_5 \partial_{\theta} \omega_{\lambda}^{\alpha}{}_{\alpha} \partial^{\lambda} \omega_{\kappa}^{\theta \kappa}$

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

	$\omega_{1}^{\sharp 1}{}_{lphaeta}$	$\omega_{1}^{\#2}{}_{\alpha\beta}$	$f_{1+\alpha\beta}^{\#1}$	$\omega_{1}^{\sharp 1}{}_{lpha}$	$\omega_{1-\alpha}^{\#2}$	$f_{1}^{\#1}{}_{\alpha}$	$f_{1}^{#2}\alpha$
$\omega_{1}^{\#1}\dagger^{lphaeta}$	$k^2 (2r_1 + r_5) - \frac{t_1}{2}$	$-\frac{t_1}{\sqrt{2}}$	$-\frac{ikt_1}{\sqrt{2}}$	0	0	0	0
$\omega_{1}^{\#2}\dagger^{\alpha\beta}$	$-\frac{t_1}{\sqrt{2}}$	0	0	0	0	0	0
$f_{1}^{\#1}\dagger^{\alpha\beta}$	$\frac{i k t_1}{\sqrt{2}}$	0	0	0	0	0	0
$\omega_1^{\sharp_1} \dagger^{lpha}$	0	0	0	$k^2 (r_1 + r_5) + \frac{t_1}{6}$	$\frac{t_1}{3\sqrt{2}}$	0	<u>ī kt</u> 3
$\omega_{1}^{#2} \dagger^{\alpha}$	0	0	0	$\frac{t_1}{3\sqrt{2}}$	<u>t</u> 1 3	0	$\frac{1}{3}\bar{l}\sqrt{2}kt_1$
$f_{1}^{#1} \dagger^{\alpha}$	0	0	0	0	0	0	0
$f_1^{#2} \dagger^{\alpha}$	0	0	0	$-rac{1}{3}ar{l}kt_1$	$-\frac{1}{3}\bar{l}\sqrt{2}kt_1$	0	$\frac{2k^2t_1}{3}$

Source constraints				
SO(3) irreps	#			
$\sigma_{0^{+}}^{\#1} == 0$	1			
$\tau_{0+}^{\#1} == 0$	1			
$\tau_{0+}^{\#2} == 0$	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			





$r_1 < 0 & r_5 < -r_1 & t_1 > 0$	Unitarity conditions
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