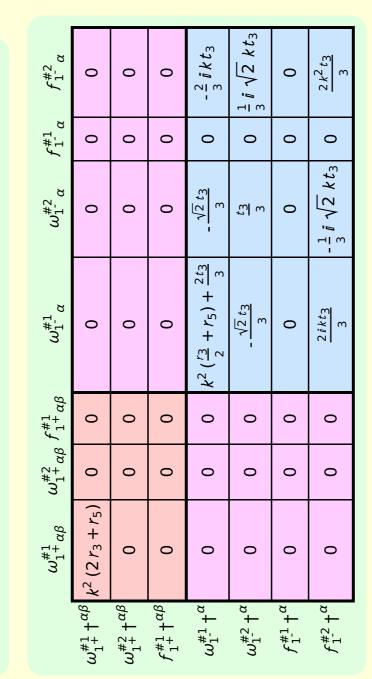
${\mathfrak t}_1^{\#2}$	0	0	0	$\frac{4i}{k(1+2k^2)(r_3+2r_5)}$	$\frac{i\sqrt{2}(3k^2(r_3+2r_5)+4t_3)}{k(1+2k^2)^2(r_3+2r_5)t_3}$	0	$\frac{6k^2(r_3+2r_5)+8t_3}{(1+2k^2)^2(r_3+2r_5)t_3}$
$\tau_{1}^{\#1}{}_{\alpha}$	0	0	0	0	0	0	0
$\sigma_{1}^{\#2}{}_{lpha}$	0	0	0	$\frac{2\sqrt{2}}{k^2(1+2k^2)(r_3+2r_5)}$	$\frac{3 k^2 (r_3 + 2 r_5) + 4 t_3}{(k + 2 k^3)^2 (r_3 + 2 r_5) t_3}$	0	$-\frac{i\sqrt{2}(3k^2(r_3+2r_5)+4t_3)}{k(1+2k^2)^2(r_3+2r_5)t_3}$
$\sigma_{1^{-}\alpha}^{\#1}$	0	0	0	$\frac{2}{k^2 (r_3 + 2 r_5)}$	$\frac{2\sqrt{2}}{k^2(1+2k^2)(r_3+2r_5)}$	0	$-\frac{4i}{k(1+2k^2)(r_3+2r_5)}$
$\tau_{1}^{\#1}\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!\!$	0	0	0	0	0	0	0
$\sigma_{1}^{\#2}{}_{\alpha\beta}\ \tau_{1}^{\#1}{}_{\alpha\beta}$	0	0	0	0	0	0	0
$\sigma_{1}^{\#1}{}_{\alpha\beta}$	$\frac{1}{k^2 (2 r_3 + r_5)}$	0	0	0	0	0	0
	$\sigma_1^{\#1} + \alpha^{\beta}$	$\sigma_{1}^{\#2} + \alpha \beta$	$\tau_1^{\#1} + \alpha \beta$	$\sigma_{1}^{\#1} +^{\alpha}$	$\sigma_1^{\#2} +^{\alpha}$	$\tau_{1}^{\#1} +^{\alpha}$	$\tau_1^{\#2} + ^{\alpha}$

Lagrangian density
$\frac{1}{3}t_3 \; \omega_{,\alpha}^{\;\; \alpha'} \; \omega_{\kappa\alpha}^{\;\; \alpha'} + f^{\alpha r} \; \tau_{\alpha \beta} + \omega^{\alpha r \lambda} \; \sigma_{\alpha \beta \chi}^{\;\; -\frac{1}{2}} r_3 \; \partial_i \omega_{^{\kappa \chi}}^{\;\; \kappa} \; \partial^i \omega_{_{\chi}}^{\;\; \alpha} - r_5 \; \partial_i \omega_{^{\kappa \chi}}^{\;\; \kappa} \; \partial^i \omega_{_{\chi}}^{\;\; \kappa} \; \partial^i \omega_{_{\chi}}^{\;\; \alpha} + \sigma_{\alpha \beta \chi}^{\;\; \alpha'} \; \partial^i \omega_{_{\chi}}^{\;\; \alpha'} \; \partial$
$rac{2}{3} r_2  \partial^{eta} \omega^{eta lpha}_{ \kappa} \partial_{eta} \omega^{\kappa}_{ \beta} - rac{1}{3} r_2  \partial_{eta} \omega^{lpha}_{ \beta} \partial_{\kappa} \omega^{lpha eta eta} - rac{2}{3} r_2  \partial_{eta} \omega_{lpha eta}^{ \kappa}  \partial_{\kappa} \omega^{eta lpha} +$
$rac{1}{2}r_3\partial_lpha\omega_\lambda^{lpha}\partial_\kappa\omega^{\kappa\lambda}$ - $r_5\partial_lpha\omega_\lambda^{lpha}\partial_\kappa\omega^{\kappa\lambda}$ - $rac{1}{2}r_3\partial_\theta\omega_\lambda^{lpha}\partial_\kappa\omega^{\kappa\lambda}$ +
$r_5\partial_\theta\omega_\lambda^{\alpha}\partial_\kappa\omega^{\theta\kappa\lambda} - \frac{1}{2}r_3\partial_\alpha\omega_\lambda^{\alpha}\partial_\kappa\omega^{\kappa\lambda\theta} - r_5\partial_\alpha\omega_\lambda^{\alpha}\partial_\kappa\omega^{\kappa\lambda\theta} + r_3\partial_\theta\omega_\lambda^{\alpha}\partial_\kappa\omega^{\kappa\lambda\theta} +$
$2 r_5 \partial_\theta \omega_\lambda^{\ \alpha} \partial_\kappa \omega^{\kappa\lambda\theta} - \frac{2}{3} t_3 \ \omega_{\kappa\alpha}^{\ \alpha} \partial^\kappa f'_{\ \prime} - \frac{2}{3} t_3 \ \omega_{\kappa\lambda}^{\ \lambda} \partial^\kappa f'_{\ \prime} - \frac{4}{3} t_3 \partial^\alpha f_{\ \kappa\alpha} \partial^\kappa f'_{\ \prime} +$
$\frac{2}{3}t_3\partial_\kappa f^\lambda_{}\partial^\kappa f'_{} + \frac{2}{3}t_3\omega_{_{I}\alpha}^{\alpha}\partial^\kappa f'_{} + \frac{2}{3}t_3\omega_{_{I}\lambda}^{\lambda}\partial^\kappa f'_{} + \frac{2}{3}t_3\partial^\alpha f^\lambda_{}\partial^\kappa f_{\lambda\kappa} +$
$rac{1}{3}r_2\partial_{\kappa}\omega^{lphaeta heta}\partial^{\kappa}\omega_{lphaeta heta}+rac{2}{3}r_2\partial_{\kappa}\omega^{etalphaeta}\partial^{\kappa}\omega_{lphaeta heta}-rac{2}{3}r_2\partial^{eta}\omega_{lpha\lambda}^{\ lpha\lambda}\partial_{\lambda}\omega_{lphaeta}^{\ \prime}+$
$rac{2}{3}  r_2  \partial^{eta} \omega_{\lambda}{}^{\lambda lpha} \partial_{\lambda} \omega_{lphaeta}{}^{\prime} - 4  r_3  \partial^{eta} \omega_{\lambda}{}^{\lambda lpha} \partial_{\lambda} \omega_{lphaeta}{}^{\prime} - rac{1}{2}  r_3  \partial_{lpha} \omega_{\lambda}{}^{lpha}  \partial^{\lambda} \omega^{eta \kappa}{}^{\kappa}  +$
$r_5\partial_{lpha}\omega_{\lambda}^{\ \ lpha}\partial^{\lambda}\omega^{eta\kappa}_{\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ $



	$\sigma_{2^{+}\alpha\beta}^{\#1}$	$\tau_{2^{+}\alpha\beta}^{\#1}$	$\sigma_{2}^{\#1}{}_{\alpha\beta\chi}$
$\sigma_{2^{+}}^{\sharp 1}\dagger^{\alpha\beta}$	$-\frac{2}{3k^2r_3}$	0	0
$\tau_{2}^{\#1} \dagger^{\alpha\beta}$	0	0	0
$\sigma_2^{\#1} \dagger^{\alpha\beta\chi}$	0	0	0

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

$\sigma_0^{#1}$ $\tau_0^{#1}$	: †	$\frac{i}{(1+2)}$	$\frac{1}{k^2)^2} t_3^2 \frac{1}{k^2} t_3^2 t_3^2$		$i \sqrt{2} + 2k^2$ $+2k^2$ $+2k^2$ $+2k^2$	$\frac{2}{t_3}$	0	0				$\omega_{2+}^{#1} +^{\alpha\beta}$	$f^{#1} + \alpha \beta$	$^{\prime}$ 2 <sup>+</sup> 1.	ω <sub>2</sub> - Τ ···		
$\tau_{0}^{#2}$ $\sigma_{0}^{#1}$			0		0		0	$\frac{1}{k^2 r_1^2}$	_				$\omega_{0}^{\#1}$	0	0	0	k <sup>2</sup> r,
U	Ľ							<i>k</i> - <i>r</i>	2				$f_0^{\#2}$	0	0	0	0
ints	#	П	0 1	α == 0 3	m	m	m	) L	2	2	24		$f_0^{\#1}$	-i $\sqrt{2} kt_3$	$2 k^2 t_3$	0	0
Source constraints	irreps	0	$2ik\sigma_{0+}^{\#1} == 0$	$+2ik\sigma_{1}^{\#2}\alpha$	0 ==	0 ==	0 ==	íl	0 == ,	0 ==	:#		$\omega_{0}^{\#1}$	£3	$i\sqrt{2}kt_3$	0	0
Source	SO(3) irreps	$\tau_0^{\#2} == 0$	$\tau_{0}^{\#1}$ - 2		$\tau_{1}^{\#1}{}^{\alpha} =$	$\tau_1^{\#1}\alpha\beta$	$\sigma^{\#2}\alpha\beta$	$\sigma_{1}^{+}$	$\sigma_2^{*1}$	$\tau_2^{\#1}\alpha\beta$	Total #:			$\omega_{0}^{\#1}  \dagger$	$f_0^{\#1}$ †	$f_0^{#2} +$	$\omega_{\tilde{c}^{-1}}^{*1}$ +

 $\omega_{2}^{\#1}_{+}$   $\beta_{2}^{\#1}_{2}$   $\alpha_{2}^{\#1}_{2}$   $\alpha_{\beta\chi}$ 

$f_{0}^{\#2}$	0	0	0	0
$f_0^{\#1}$	$-i \sqrt{2} k t_3$	$2 k^2 t_3$	0	0
$\omega_{0}^{\#1}$	<i>t</i> <sup>3</sup>	$i\sqrt{2}\ kt_3$	0	0
·	$\omega_{0}^{\#1}$ †	$f_0^{\#1}$ †	$f_0^{#2} \uparrow$	$\omega_{0}^{\#1} \uparrow$

?		
	Quadratic pole	
$\stackrel{k^{\mu}}{\longrightarrow}$ ?	Pole residue:	$-\frac{1}{r_3(2r_3+r_5)(r_3+2r_5)p^2} > 0$
?	Polarisations:	2

Unitarity conditions

 $r_3 < 0 \&\& (r_5 < -\frac{r_3}{2} || r_5 > -2 r_3) || r_3 > 0 \&\& -2 r_3 < r_5 < -\frac{r_3}{2}$ 

(No massive particles)