

$\omega_0^{\#1} +$	$f_0^{\#1} +$	$f_0^{\#2} +$	$\omega_0^{\#1} +$
t_3	$-i\sqrt{2}kt_3$	0	0
$i\sqrt{2}kt_3$	$2k^2t_3$	0	0
0	0	0	0
0	0	0	0

$\omega_2^{\#1} + \alpha\beta$	$f_2^{\#1} + \alpha\beta$	$\omega_2^{\#1} - \alpha\beta x$
$-\frac{3k^2 r_3}{2}$	0	0
0	0	0
$\omega_2^{\#1} + \alpha\beta x$		0

	$\sigma_0^{+\#1}$	$\tau_0^{+\#1}$	$\tau_0^{+\#2}$	$\sigma_0^{-\#1}$
$\sigma_0^{+\#1} \dagger$	$\frac{1}{(1+2k^2)^2 t_3}$	$-\frac{i\sqrt{2}k}{(1+2k^2)^2 t_3}$	0	0
$\tau_0^{+\#1} \dagger$	$\frac{i\sqrt{2}k}{(1+2k^2)^2 t_3}$	$\frac{2k^2}{(1+2k^2)^2 t_3}$	0	0
$\tau_0^{+\#2} \dagger$	0	0	0	0
$\sigma_0^{-\#1} \dagger$	0	0	0	0

$$\begin{aligned} & \frac{2}{3} t_3 \omega_{\lambda}^{\alpha} \omega_{\kappa \alpha}^{\kappa} - \frac{1}{2} r_3 \partial_{\lambda} \omega^{\kappa \lambda}_{\kappa} \partial^{\lambda} \omega_{\lambda}^{\alpha} - \\ & r_5 \partial_{\lambda} \omega^{\kappa \lambda}_{\kappa} \partial^{\lambda} \omega_{\lambda}^{\alpha} + \frac{1}{2} r_3 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\theta} \omega^{\theta \kappa \lambda} - r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{\theta \kappa \lambda} - \\ & \frac{1}{2} r_3 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial_{\kappa} \omega^{\theta \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'_{\lambda} - \frac{2}{3} t_3 \omega_{\kappa \lambda}^{\lambda} \partial^{\kappa} f'_{\lambda} - \frac{4}{3} t_3 \partial^{\alpha} f_{\kappa \alpha} \partial^{\kappa} f'_{\lambda} + \\ & \frac{2}{3} t_3 \partial_{\kappa} f^{\lambda}_{\lambda} \partial^{\kappa} f'_{\lambda} + \frac{2}{3} t_3 \omega_{\lambda \alpha}^{\alpha} \partial^{\kappa} f'_{\kappa} + \frac{2}{3} t_3 \omega_{\lambda \lambda}^{\lambda} \partial^{\kappa} f'_{\kappa} + \\ & \frac{2}{3} t_3 \partial^{\alpha} f^{\lambda}_{\alpha} \partial^{\kappa} f_{\lambda \kappa} - 4 r_3 \partial^{\beta} \omega_{\lambda}^{\lambda \alpha} \partial_{\lambda} \omega_{\alpha \beta}^{\lambda} - \frac{1}{2} r_3 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa} + \\ & r_5 \partial_{\alpha} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa} + \frac{1}{2} r_3 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa} - r_5 \partial_{\theta} \omega_{\lambda}^{\alpha} \partial^{\lambda} \omega^{\theta \kappa}_{\kappa} \end{aligned}$$

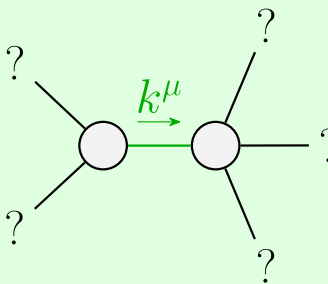
Added source term: $f^{\alpha \beta} \tau_{\alpha \beta} + \omega^{\alpha \beta \chi} \sigma_{\alpha \beta \chi}$

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

Source constraints	
SO(3) irreps	#
$\sigma_0^{#1} == 0$	1
$\tau_0^{#2} == 0$	1
$\tau_0^{#1} - 2 \, i \, k \, \sigma_0^{#1} == 0$	1
$\tau_1^{#2 \, \alpha} + 2 \, i \, k \, \sigma_1^{#2 \, \alpha} == 0$	3
$\tau_1^{#1 \, \alpha} == 0$	3
$\tau_1^{#1 \, \alpha \beta} == 0$	3
$\sigma_1^{#2 \, \alpha \beta} == 0$	3
$\sigma_2^{#1 \, \alpha \beta \chi} == 0$	5
$\tau_2^{#1 \, \alpha \beta} == 0$	5
Total #:	25

	$\omega_{1+}^{\#1} + \alpha\beta$	$\omega_{1+}^{\#2} + \alpha\beta$	$f_{1+}^{\#1} + \alpha\beta$	$\omega_{1-}^{\#1} - \alpha$	$\omega_{1-}^{\#2} - \alpha$	$f_{1-}^{\#1} - \alpha$	$f_{1-}^{\#2} - \alpha$
$\omega_{1+}^{\#1} + \alpha\beta$	$k^2(2r_3 + r_5)$	0	0	0	0	0	0
$\omega_{1+}^{\#2} + \alpha\beta$	0	0	0	0	0	0	0
$f_{1+}^{\#1} + \alpha\beta$	0	0	0	0	0	0	0
$\omega_{1-}^{\#1} + \alpha$	0	0	0	$k^2(\frac{r_3}{2} + r_5) + \frac{2t_3}{3}$	$-\frac{\sqrt{2}t_3}{3}$	0	$-\frac{2}{3}i\sqrt{2}kt_3$
$\omega_{1-}^{\#2} + \alpha$	0	0	0	$-\frac{\sqrt{2}t_3}{3}$	$\frac{t_3}{3}$	0	$\frac{1}{3}i\sqrt{2}kt_3$
$f_{1-}^{\#1} + \alpha$	0	0	0	0	0	0	0
$f_{1-}^{\#2} + \alpha$	0	0	0	$\frac{2ikt_3}{3}$	$-\frac{1}{3}i\sqrt{2}kt_3$	0	$\frac{2k^2t_3}{3}$

	$\sigma_{1+}^{\#1} \alpha \beta$	$\sigma_{1+}^{\#2} \alpha \beta$	$\tau_{1+}^{\#1} \alpha \beta$	$\sigma_{1-}^{\#1} \alpha$	$\sigma_{1-}^{\#2} \alpha$	$\tau_{1-}^{\#1} \alpha$	$\tau_{1-}^{\#2} \alpha$
$\sigma_{1+}^{\#1} + \alpha \beta$	$\frac{1}{k^2(2r_3+r_5)}$	0	0	0	0	0	0
$\sigma_{1+}^{\#2} + \alpha \beta$	0	0	0	0	0	0	0
$\tau_{1+}^{\#1} + \alpha \beta$	0	0	0	0	0	0	0
$\sigma_{1-}^{\#1} + \alpha$	0	0	0	$\frac{2}{k^2(r_3+2r_5)}$	$\frac{2\sqrt{2}}{k^2(1+2k^2)(r_3+2r_5)}$	0	$\frac{4i}{k(1+2k^2)(r_3+2r_5)}$
$\sigma_{1-}^{\#2} + \alpha$	0	0	0	$\frac{2\sqrt{2}}{k^2(1+2k^2)(r_3+2r_5)}$	$\frac{3k^2(r_3+2r_5)+4t_3}{(k+2k^3)^2(r_3+2r_5)t_3}$	0	$\frac{i\sqrt{2}(3k^2(r_3+2r_5)+4t_3)}{k(1+2k^2)^2(r_3+2r_5)t_3}$
$\tau_{1-}^{\#1} + \alpha$	0	0	0	0	0	0	0
$\tau_{1-}^{\#2} + \alpha$	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	$\frac{6k^2(r_3+2r_5)+8t_3}{(1+2k^2)^2(r_3+2r_5)t_3}$



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

Unitarity conditions

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

(No massive particles)