

Lagrangian density

$$\beta \partial_\alpha \phi \partial^\alpha \phi + \frac{1}{2} \alpha \partial_\beta h^\chi_\chi \partial^\beta h^\alpha_\alpha + \alpha \partial_\alpha h^{\alpha\beta} \partial_\chi h^\chi_\beta - \alpha \partial^\beta h^\alpha_\alpha \partial_\chi h^\chi_\beta - \frac{1}{2} \alpha \partial_\chi h_{\alpha\beta} \partial^\chi h^{\alpha\beta}$$

Added source term: $\phi \rho + h^{\alpha\beta} \mathcal{T}_{\alpha\beta}$

$$\mathcal{T}_{2^+}^{\#1}{}_{\alpha\beta} \quad \mathcal{T}_{2^+}^{\#1}{}_{\dagger\alpha\beta} \quad \boxed{-\frac{2}{\alpha k^2}}$$

$$h_{2^+}^{\#1}{}_{\alpha\beta} \quad h_{2^+}^{\#1}{}_{\dagger\alpha\beta} \quad \boxed{-\frac{\alpha k^2}{2}}$$

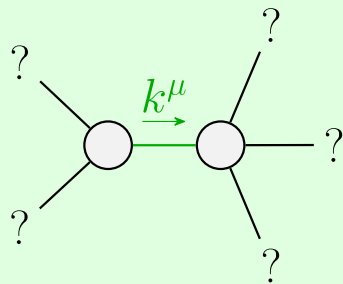
$$\mathcal{T}_{1^-}^{\#1}{}_\alpha \quad \mathcal{T}_{1^-}^{\#1}{}_{\dagger\alpha} \quad \boxed{0}$$

$$h_{1^-}^{\#1}{}_\alpha \quad h_{1^-}^{\#1}{}_{\dagger\alpha} \quad \boxed{0}$$

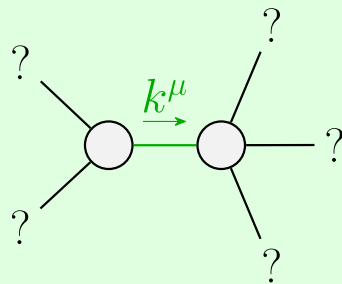
$\mathcal{T}_{0^+}^{\#1}{}_{\dagger}$	$\mathcal{T}_{0^+}^{\#2}{}_{\dagger}$	$\mathcal{T}_{0^+}^{\#1}{}_{\rho_{0^+}^{\#1}{}_{\dagger}}$
$\frac{1}{\alpha k^2}$	0	0
0	0	0
0	0	$\frac{1}{\beta k^2}$

Source constraints	SO(3) irreps	#
$\mathcal{T}_{0^+}^{\#2}{}_{\dagger} == 0$		1
$\mathcal{T}_{1^-}^{\#1}{}_{\dagger} == 0$		3
Total #:		4

	$h_{0^+}^{\#1}{}_{\dagger}$	$h_{0^+}^{\#2}{}_{\dagger}$	$\phi_{0^+}^{\#1}{}_{\dagger}$
$h_{0^+}^{\#1}{}_{\dagger}$	αk^2	0	0
$h_{0^+}^{\#2}{}_{\dagger}$	0	0	0
$\phi_{0^+}^{\#1}{}_{\dagger}$	0	0	βk^2



Quadratic pole	
Pole residue:	$-\frac{1}{\alpha} > 0$
Polarisations:	2



Quadratic pole	
Pole residue:	$\frac{1}{\beta} > 0$
Polarisations:	1

Unitarity conditions
 $\alpha < 0 \ \& \ \beta > 0$

(No massive particles)