

	$\phi_0^{\#1}$	$\mathcal{A}_0^{\#1}$	$\mathcal{B}_0^{\#1}$	$\mathcal{C}_0^{\#1}$			
$\phi_0^{\#1} \dagger$	$\zeta + k^2 \delta$	$\frac{i k \epsilon}{2}$	0	0			
$\mathcal{A}_0^{\#1} \dagger$	$-\frac{1}{2} i k \epsilon$	$k^2 \alpha$	0	0			
$\mathcal{B}_0^{\#1} \dagger$	0	0	0	0			
$\mathcal{C}_0^{\#1} \dagger$	0	0	0	0	$\mathcal{A}_1^{\#1}{}_\alpha$	$\mathcal{B}_1^{\#1}{}_\alpha$	$\mathcal{C}_1^{\#1}{}_\alpha$
			$\mathcal{A}_1^{\#1} \dagger^\alpha$		0	0	0
			$\mathcal{B}_1^{\#1} \dagger^\alpha$		0	$k^2 \beta$	$\frac{k^2 \gamma}{2}$
			$\mathcal{C}_1^{\#1} \dagger^\alpha$		0	$\frac{k^2 \gamma}{2}$	$k^2 \delta$

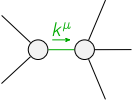
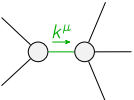
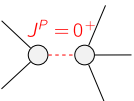
	$\rho_0^{\#1}$	$\mathcal{T}_0^{\#1}$	$\mathcal{K}_0^{\#1}$	$\mathcal{K}_0^{\#1}$			
$\rho_0^{\#1} \dagger$	$\frac{k^2 \alpha}{\text{Det}(0^+)}$	$-\frac{i k \epsilon}{2 \text{Det}(0^+)}$	0	0			
$\mathcal{T}_0^{\#1} \dagger$	$\frac{i k \epsilon}{2 \text{Det}(0^+)}$	$\frac{\zeta + k^2 \delta}{\text{Det}(0^+)}$	0	0			
$\mathcal{K}_0^{\#1} \dagger$	0	0	0	0			
$\mathcal{K}_0^{\#1} \dagger$	0	0	0	0	$\mathcal{T}_1^{\#1}{}_\alpha$	$\mathcal{K}_1^{\#1}{}_\alpha$	$\mathcal{K}_1^{\#1}{}_\alpha$
			$\mathcal{T}_1^{\#1} \dagger^\alpha$	0	0	0	
			$\mathcal{K}_1^{\#1} \dagger^\alpha$	0	$\frac{k^2 \delta}{\text{Det}(1^-)}$	$-\frac{k^2 \gamma}{2 \text{Det}(1^-)}$	
			$\mathcal{K}_1^{\#1} \dagger^\alpha$	0	$-\frac{k^2 \gamma}{2 \text{Det}(1^-)}$	$\frac{k^2 \beta}{\text{Det}(1^-)}$	

Abbreviations used in matrices

$$\text{Det}(0^+) = \frac{1}{4} k^2 (-\epsilon^2 + 4 \alpha (\zeta + k^2 \delta)) \quad \&\& \quad \text{Det}(1^-) = \frac{1}{4} k^4 (4 \delta \beta - \gamma^2)$$

Lagrangian

$$\zeta \phi^2 + \epsilon \phi \partial_\alpha \mathcal{A}^\alpha + \delta \partial_\alpha \phi \partial^\alpha \phi + \beta \partial_\alpha \mathcal{B}_\beta \partial^\alpha \mathcal{B}^\beta + \gamma \partial_\alpha \mathcal{B}_\beta \partial^\alpha \mathcal{C}^\beta + \\ \delta \partial_\alpha \mathcal{C}_\beta \partial^\alpha \mathcal{C}^\beta + \alpha \partial_\alpha \mathcal{A}^\alpha \partial_\beta \mathcal{A}^\beta - \beta \partial_\alpha \mathcal{B}_\beta \partial^\beta \mathcal{B}^\alpha - \gamma \partial_\alpha \mathcal{B}_\beta \partial^\beta \mathcal{C}^\alpha - \delta \partial_\alpha \mathcal{C}_\beta \partial^\beta \mathcal{C}^\alpha$$

Added source term(s):	$\phi \rho + \mathcal{A}^\alpha \mathcal{J}_\alpha + \mathcal{B}^\alpha \mathcal{K}_\alpha + \mathcal{C}^\alpha \mathcal{K}_\alpha$		
Source constraint(s)	# constraint(s)	Covariant form	
$\mathcal{K}_0^{\#1} = 0$	1	$\partial_\alpha \mathcal{K}^\alpha = 0$	
$\mathcal{K}_0^{\#1} = 0$	1	$\partial_\alpha \mathcal{K}^\alpha = 0$	
$\mathcal{J}_1^{\#1\alpha} = 0$	3	$\partial_\beta \partial^\alpha \mathcal{J}^\beta = \partial_\beta \partial^\beta \mathcal{J}^\alpha$	
Total # constraint(s):	5		
Resolved pole(s)	# polarization(s)	Square mass	Residue
	2	0	$-\frac{\delta + \beta + \sqrt{\delta^2 - 2 \delta \beta + \beta^2 + \gamma^2}}{4 \delta \beta - \gamma^2}$
	2	0	$-\frac{\delta + \beta - \sqrt{\delta^2 - 2 \delta \beta + \beta^2 + \gamma^2}}{4 \delta \beta - \gamma^2}$
	1	$\frac{\epsilon^2 - 4 \alpha \zeta}{4 \alpha \delta}$	$\frac{\alpha \epsilon^2 - 4 \alpha^2 \zeta + \epsilon^2 \delta}{\alpha \epsilon^2 \delta - 4 \alpha^2 \zeta \delta}$
Resolved unitarity condition(s):		(Demonstrably impossible)	