Lagrangian density

$$h^{\alpha\beta}\,\mathcal{T}_{\alpha\beta}+\tfrac{1}{2}\,\alpha\,\partial_\beta h^{\chi}{}_{\chi}\,\partial^\beta h^{\alpha}{}_{\alpha}+\beta\,\partial_\alpha h^{\alpha\beta}\,\partial_\chi h_\beta{}^{\chi}-\alpha\,\partial^\beta h^{\alpha}{}_{\alpha}\,\partial_\chi h_\beta{}^{\chi}-\tfrac{1}{2}\,\alpha\,\partial_\chi h_{\alpha\beta}\,\partial^\chi h^{\alpha\beta}$$

(No source constraints)

	$h_{0^+}^{\#1}$	$h_{0^+}^{\#2}$
$h_{0^+}^{\#1}\,\dagger$	αk^2	0
$h_{0^+}^{\#2}\,\dagger$	0	$(-\alpha+\beta)\,k^2$

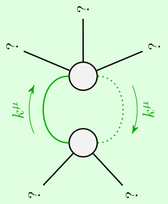
	$\mathcal{T}_{2^+}^{\#1}{}_{\alpha\beta}$
$\mathcal{T}_{2^+}^{\#1}\,\dagger^{\alpha\beta}$	$-\frac{2}{\alpha k^2}$

	$\mathcal{T}_{0^+}^{\#1}$	$\mathcal{T}_{0^+}^{\#2}$
$\mathcal{T}_{0^+}^{\#1}\,\dagger$	$\frac{1}{\alpha k^2}$	0
$\mathcal{T}_{0^+}^{\#2}\,\dagger$	0	$\frac{1}{(-\alpha+\beta)\,k^2}$

	$h_{1^-}^{\#1}{}_{\alpha}$
$h_{1^-}^{\#1}\,\dagger^{\alpha}$	$\frac{1}{2}\,\frac{1}{(-\alpha+\beta)\,k^2}$

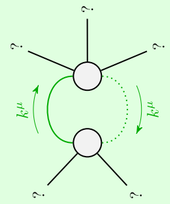
	$\mathcal{T}_{1^-}^{\#1}{}_{\alpha}$
$\mathcal{T}_{1^-}^{\#1}\,\dagger^{\alpha}$	$-\frac{2}{(\alpha-\beta)\,k^2}$

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



Quartic pole

Pole residue:	$0<\frac{6\,\alpha+3\,\beta-\sqrt{3}\,\sqrt{12\,\alpha^2+12\,\alpha\,\beta+19\,\beta^2+64\,(\alpha-\beta)^2\,p^2}}{\alpha\,(\alpha-\beta)}$ && $\frac{6\,\alpha+3\,\beta-\sqrt{3}\,\sqrt{12\,\alpha^2+12\,\alpha\,\beta+19\,\beta^2+64\,(\alpha-\beta)^2\,p^2}}{\alpha\,(\alpha-\beta)}>0$
Polarisations:	1



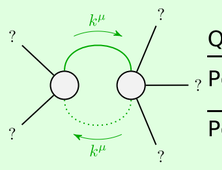
Quartic pole

Pole residue:	$0<\frac{6\,\alpha+3\,\beta+\sqrt{3}\,\sqrt{12\,\alpha^2+12\,\alpha\,\beta+19\,\beta^2+64\,(\alpha-\beta)^2\,p^2}}{\alpha\,(\alpha-\beta)}$ && $\frac{6\,\alpha+3\,\beta+\sqrt{3}\,\sqrt{12\,\alpha^2+12\,\alpha\,\beta+19\,\beta^2+64\,(\alpha-\beta)^2\,p^2}}{\alpha\,(\alpha-\beta)}>0$
Polarisations:	1

(No massive particles)

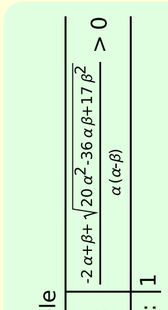
Unitarity conditions

(Unitarity is demonstrably impossible)



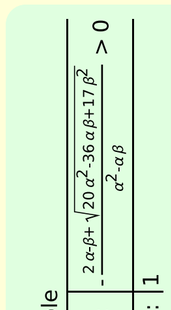
Quartic pole

Pole residue:	$0<\frac{\beta}{\alpha^2-\alpha\,\beta}$ && $\frac{\beta}{\alpha^2-\alpha\,\beta}>0$
Polarisations:	2



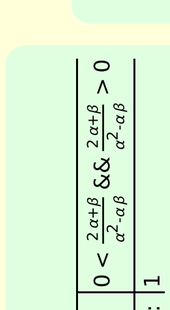
Quadratic pole

Pole residue:	$\frac{-2\,\alpha+\beta+\sqrt{20\,\alpha^2-36\,\alpha\,\beta+17\,\beta^2}}{\alpha\,(\alpha-\beta)}>0$
Polarisations:	1



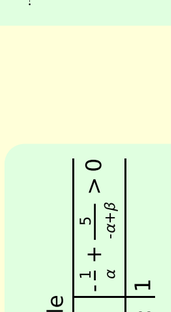
Quadratic pole

Pole residue:	$-\frac{2\,\alpha-\beta+\sqrt{20\,\alpha^2-36\,\alpha\,\beta+17\,\beta^2}}{\alpha^2-\alpha\,\beta}>0$
Polarisations:	1



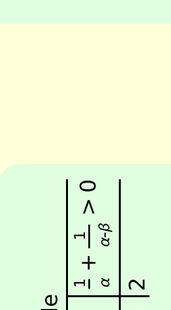
Hexic pole

Pole residue:	$0<\frac{2\,\alpha+\beta}{\alpha^2-\alpha\,\beta}$ && $\frac{2\,\alpha+\beta}{\alpha^2-\alpha\,\beta}>0$
Polarisations:	1



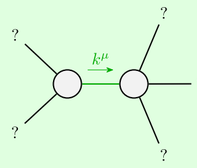
Quadratic pole

Pole residue:	$-\frac{1}{\alpha}+\frac{5}{-\alpha+\beta}>0$
Polarisations:	1



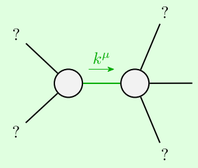
Quadratic pole

Pole residue:	$\frac{1}{\alpha}+\frac{1}{\alpha-\beta}>0$
Polarisations:	2



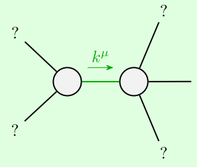
Quadratic pole

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



Quadratic pole

Pole residue:	$\frac{1}{\alpha}+\frac{5}{\alpha-\beta}>0$
Polarisations:	1



Quadratic pole

Pole residue:	$-\frac{1}{\alpha}+\frac{1}{-\alpha+\beta}>0$
Polarisations:	2