

Lagrangian density

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

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

$\mathcal{T}^{\#1}_{0+} + \mathcal{T}^{\#2}_{0+} +$

0	$\frac{1}{\alpha k^2}$
$\frac{1}{(-\alpha+\beta)k^2}$	0

$\mathcal{T}^{\#1}_{0+}$
 $\mathcal{T}^{\#2}_{0+}$

$h^{\#1}_{0+} + h^{\#2}_{0+} +$

αk^2	0
0	$(-\alpha+\beta)k^2$

$h^{\#1}_{0+}$
 $h^{\#2}_{0+}$

$h^{\#1}_{1-} + \alpha$

$\frac{1}{2}(-\alpha+\beta)k^2$

$h^{\#1}_{1-}$
 α

$\mathcal{T}^{\#1}_{2+} + \alpha\beta$

$-\frac{2}{\alpha k^2}$

$\mathcal{T}^{\#1}_{2+}$
 $\alpha\beta$

$\mathcal{T}^{\#1}_{1-} + \alpha$

$-\frac{2}{(\alpha-\beta)k^2}$

$\mathcal{T}^{\#1}_{1-}$
 α

$h^{\#1}_{2+} + \alpha\beta$

$-\frac{\alpha k^2}{2}$

$h^{\#1}_{2+}$
 $\alpha\beta$

(No source constraints)

Quartic pole

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

Quadratic pole

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

Unitarity conditions

(Unitarity is demonstrably impossible)

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

Quadratic pole

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

Quadratic pole

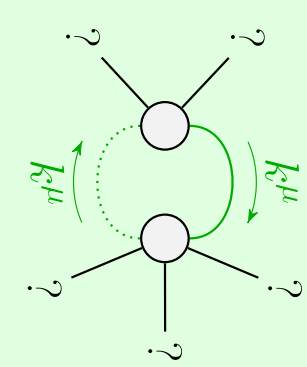
Pole residue:	$\frac{1}{\alpha} + \frac{5}{\alpha-\beta} > 0$
Polarisations:	1

Quartic pole

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

Quartic pole

Pole residue:	$0 < \frac{6\alpha+3\beta+\sqrt{3}}{\alpha(\alpha-\beta)} \frac{\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2p^2}}{\alpha(\alpha-\beta)} \&\&$ $\frac{6\alpha+3\beta+\sqrt{3}}{\alpha(\alpha-\beta)} \frac{\sqrt{12\alpha^2+12\alpha\beta+19\beta^2+64(\alpha-\beta)^2p^2}}{\alpha(\alpha-\beta)} > 0$
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:	$-\frac{2\alpha+\beta+\sqrt{20\alpha^2-36\alpha\beta+17\beta^2}}{\alpha(\alpha-\beta)} > 0$
Polarisations:	1

(No massive particles)