PSALTer results panel

$$S == \int\int\int\int \left(h^{\alpha\beta}\ \mathcal{T}_{\alpha\beta} + \alpha_{\cdot 2}\, \partial_\alpha h^{\alpha\beta}\, \partial_\chi h_\beta{}^\chi + \frac{1}{2}\, \alpha_{\cdot 1} \left(\partial_\beta h^\chi{}_\chi\, \partial^\beta h^\alpha{}_\alpha - 2\, \partial^\beta h^\alpha{}_\alpha\, \partial_\chi h_\beta{}^\chi - \partial_\chi h_{\alpha\beta}\, \partial^\chi h^{\alpha\beta} \right) \right) [t,\ x,\ y,\ z]\, dt\, dz\, dy\, dx\, dt$$

Wave operator

	$0^+_{\cdot} h^\perp$	$0^+_{\cdot} h^\parallel$	$1^-_{\cdot} h^\perp{}_\alpha$	$2^+_{\cdot} h^\parallel{}_{\alpha\beta}$
$0^+_{\cdot} h^\perp\, \dagger$	$\left(-\alpha_{\cdot 1} + \alpha_{\cdot 2}\right) k^2$	0		
$0^+_{\cdot} h^\parallel\, \dagger$	0	$\alpha_{\cdot 1}\, k^2$		
$1^-_{\cdot} h^\perp{}_\alpha$			$\frac{1}{2} \left(-\alpha_{\cdot 1} + \alpha_{\cdot 2}\right) k^2$	
$1^-_{\cdot} h^\perp\, \dagger^\alpha$				$2^+_{\cdot} h^\parallel{}_{\alpha\beta}$
$2^+_{\cdot} h^\parallel\, \dagger^{\alpha\beta}$				$-\frac{\alpha_{\cdot 1}\, k^2}{2}$

Saturated propagator

	$0^+_{\cdot} \mathcal{T}^\perp$	$0^+_{\cdot} \mathcal{T}^\parallel$	$1^-_{\cdot} \mathcal{T}^\perp{}_\alpha$	$2^+_{\cdot} \mathcal{T}^\parallel{}_{\alpha\beta}$
$0^+_{\cdot} \mathcal{T}^\perp\, \dagger$	$\frac{1}{\left(-\alpha_{\cdot 1}+\alpha_{\cdot 2}\right) k^2}$	0		
$0^+_{\cdot} \mathcal{T}^\parallel\, \dagger$	0	$\frac{1}{\alpha_{\cdot 1}\, k^2}$		
$1^-_{\cdot} \mathcal{T}^\perp{}_\alpha$			$-\frac{2}{\left(\alpha_{\cdot 1}-\alpha_{\cdot 2}\right) k^2}$	
$1^-_{\cdot} \mathcal{T}^\perp\, \dagger^\alpha$				$2^+_{\cdot} \mathcal{T}^\parallel{}_{\alpha\beta}$
$2^+_{\cdot} \mathcal{T}^\parallel\, \dagger^{\alpha\beta}$				$-\frac{2}{\alpha_{\cdot 1}\, k^2}$

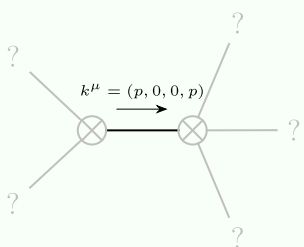
Source constraints

(No source constraints)

Massive spectrum

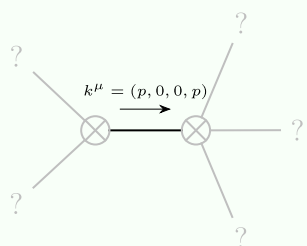
(No particles)

Massless spectrum



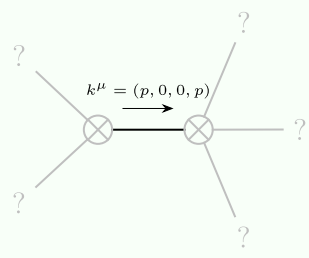
Massless particle

Pole residue:	$-\frac{p^2}{\alpha_{\cdot 1}} > 0$
Polarisations:	2



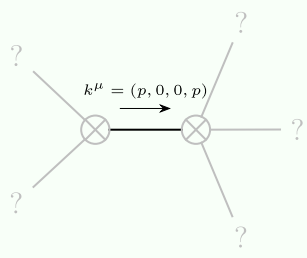
Massless particle

Pole residue:	$\frac{(-2\,\alpha_{\cdot 1}+\alpha_{\cdot 2})\, p^2}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} > 0$
Polarisations:	2



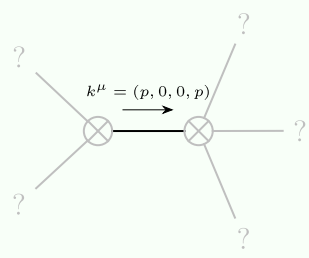
Massless particle

Pole residue:	$\frac{(2\,\alpha_{\cdot 1}-\alpha_{\cdot 2})\, p^2}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} > 0$
Polarisations:	2



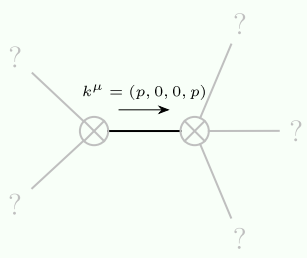
Massless particle

Pole residue:	$\frac{(-6\,\alpha_{\cdot 1}+\alpha_{\cdot 2})\, p^2}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} > 0$
Polarisations:	1



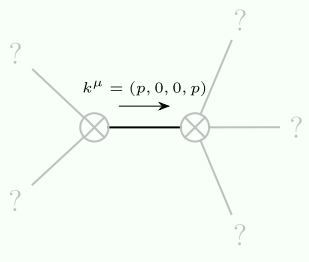
Massless particle

Pole residue:	$\frac{(6\,\alpha_{\cdot 1}-\alpha_{\cdot 2})\, p^2}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} > 0$
Polarisations:	1



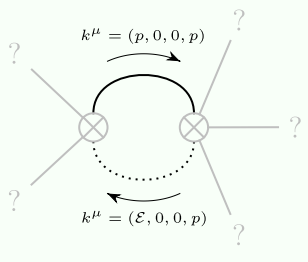
Massless particle

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



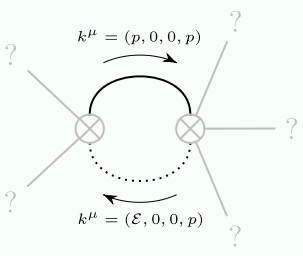
Massless particle

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

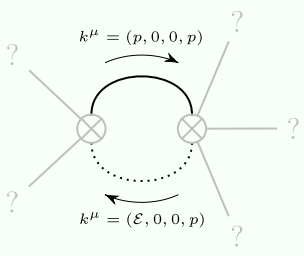


Quartic pole

Pole residue:	$0 < \frac{\alpha_{\cdot 2}\, p^4}{\alpha_{\cdot 1}{}^2-\alpha_{\cdot 1}\,\alpha_{\cdot 2}}$ && $\frac{\alpha_{\cdot 2}\, p^4}{\alpha_{\cdot 1}{}^2-\alpha_{\cdot 1}\,\alpha_{\cdot 2}} > 0$
Polarisations:	2



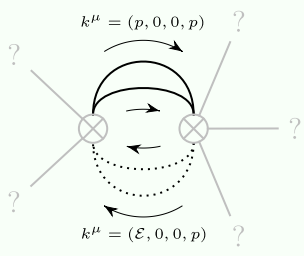
Quartic pole



Quartic pole

Pole residue:	$0 < \frac{1}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})}$ $(6\,\alpha_{\cdot 1} + 3\,\alpha_{\cdot 2} - \sqrt{3}\, \sqrt{(76\,\alpha_{\cdot 1}{}^2 - 116\,\alpha_{\cdot 1}\,\alpha_{\cdot 2} + 83\,\alpha_{\cdot 2}{}^2)})\, p^4$ && $\frac{1}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} (6\,\alpha_{\cdot 1} + 3\,\alpha_{\cdot 2} - \sqrt{3}\, \sqrt{(76\,\alpha_{\cdot 1}{}^2 - 116\,\alpha_{\cdot 1}\,\alpha_{\cdot 2} + 83\,\alpha_{\cdot 2}{}^2)})\, p^4 > 0$
Polarisations:	1

Pole residue:	$0 < \frac{1}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} (6\,\alpha_{\cdot 1} + 3\,\alpha_{\cdot 2} + \sqrt{3}\, \sqrt{(76\,\alpha_{\cdot 1}{}^2 - 116\,\alpha_{\cdot 1}\,\alpha_{\cdot 2} + 83\,\alpha_{\cdot 2}{}^2)})\, p^4$ && $\frac{1}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} (6\,\alpha_{\cdot 1} + 3\,\alpha_{\cdot 2} + \sqrt{3}\, \sqrt{(76\,\alpha_{\cdot 1}{}^2 - 116\,\alpha_{\cdot 1}\,\alpha_{\cdot 2} + 83\,\alpha_{\cdot 2}{}^2)})\, p^4 > 0$
Polarisations:	1



Hexic pole

Pole residue:	$0 < \frac{(2\,\alpha_{\cdot 1}+\alpha_{\cdot 2})\, p^6}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})}$ && $\frac{(2\,\alpha_{\cdot 1}+\alpha_{\cdot 2})\, p^6}{\alpha_{\cdot 1}\, (\alpha_{\cdot 1}-\alpha_{\cdot 2})} > 0$
Polarisations:	1

Unitarity conditions

(Demonstrably impossible)