PSALTer results panel

$$\mathcal{S} == \int\int\int\int (h^{\alpha\beta}\ \mathcal{T}_{\alpha\beta} + \frac{1}{2}\ \alpha._1\ \partial_\beta h^\chi{}_\chi\ \partial^\beta h^\alpha{}_\alpha + \alpha._1\ (\partial_\alpha h^{\alpha\beta} - \partial^\beta h^\alpha{}_\alpha)\ \partial_\chi h_\beta{}^\chi - \frac{1}{2}\ \alpha._2\ \partial_\chi h_{\alpha\beta}\ \partial^\chi h^{\alpha\beta})[t, x, y, z]\ dz\ dy\ dx\ dt$$

Wave operator

	$0^+_.h^\perp$	$0^+_.h^\parallel$	$1^-_.h^\perp{}_\alpha$	$2^+_.h^\parallel{}_{\alpha\beta}$
$0^+_.h^\perp\,\dagger$	$\frac{1}{2}\ (\alpha._1 - \alpha._2)\ k^2$	0		
$0^+_.h^\parallel\,\dagger$	0	$\frac{1}{2}\ (3\ \alpha._1 - \alpha._2)\ k^2$		
$1^-_.h^\perp\,\dagger^\alpha$			$\frac{1}{2}\ (\alpha._1 - \alpha._2)\ k^2$	
$2^+_.h^\parallel\,\dagger^{\alpha\beta}$				$-\frac{\alpha._2\ k^2}{2}$

Saturated propagator

	$0^+_.\mathcal{T}^\perp$	$0^+_.\mathcal{T}^\parallel$	$1^-_.\mathcal{T}^\perp{}_\alpha$	$2^+_.\mathcal{T}^\parallel{}_{\alpha\beta}$
$0^+_.\mathcal{T}^\perp\,\dagger$	$\frac{2}{(\alpha._1 - \alpha._2)\ k^2}$	0		
$0^+_.\mathcal{T}^\parallel\,\dagger$	0	$\frac{2}{(3\ \alpha._1 - \alpha._2)\ k^2}$		
$1^-_.\mathcal{T}^\perp\,\dagger^\alpha$			$\frac{2}{(\alpha._1 - \alpha._2)\ k^2}$	
$2^+_.\mathcal{T}^\parallel\,\dagger^{\alpha\beta}$				$-\frac{2}{\alpha._2\ k^2}$

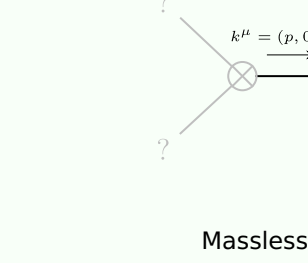
Source constraints

(No source constraints)

Massive spectrum

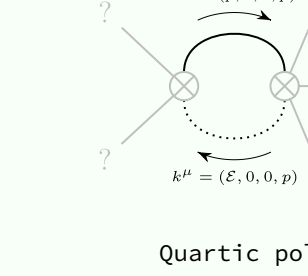
(No particles)

Massless spectrum



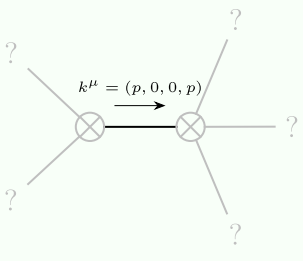
Massless particle

Pole residue:	$-\frac{(\alpha._1 - 2\ \alpha._2)\ p^2}{(\alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	2



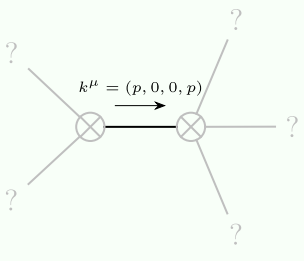
Massless particle

Pole residue:	$\frac{(\alpha._1 - 2\ \alpha._2)\ p^2}{(\alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	2



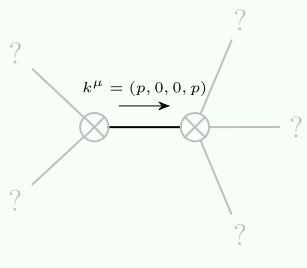
Massless particle

Pole residue:	$-\frac{p^2}{\alpha._2} > 0$
Polarisations:	2



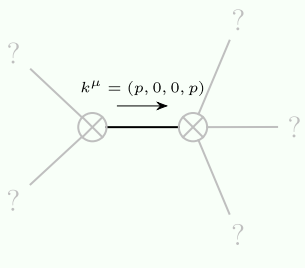
Massless particle

Pole residue:	$-\frac{(\alpha._1^2 - 6\ \alpha._1\ \alpha._2 + 2\ \alpha._2^2)\ p^2}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	1



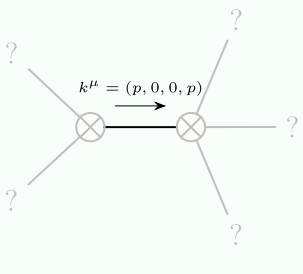
Massless particle

Pole residue:	$\frac{(\alpha._1^2 - 6\ \alpha._1\ \alpha._2 + 2\ \alpha._2^2)\ p^2}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	1



Massless particle

Pole residue:	$-(((2\ \alpha._1^2 - 5\ \alpha._1\ \alpha._2 + 2\ \alpha._2^2 + \sqrt{(\alpha._1^2\ (4\ \alpha._1^2 - 8\ \alpha._1\ \alpha._2 + 5\ \alpha._2^2))})\ p^2)/((\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2) > 0$
Polarisations:	1

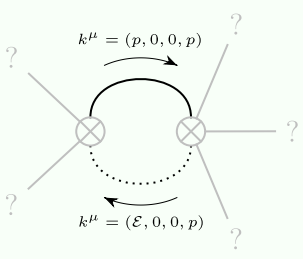


Massless particle

Pole residue:	$((-2\ \alpha._1^2 + 5\ \alpha._1\ \alpha._2 - 2\ \alpha._2^2 + \sqrt{(\alpha._1^2\ (4\ \alpha._1^2 - 8\ \alpha._1\ \alpha._2 + 5\ \alpha._2^2))})\ p^2)/((\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2) > 0$
Polarisations:	1

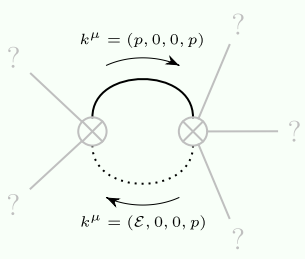
Quartic pole

Pole residue:	$0 < -\frac{\alpha._1\ p^4}{(\alpha._1 - \alpha._2)\ \alpha._2}$ && $-\frac{\alpha._1\ p^4}{(\alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	2



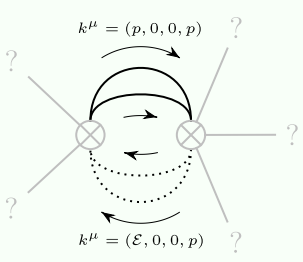
Quartic pole

Pole residue:	$0 < -\frac{\alpha._1\ (3\ \alpha._1 + \sqrt{105\ \alpha._1^2 - 96\ \alpha._1\ \alpha._2 + 48\ \alpha._2^2})\ p^4}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2}$ && $-\frac{\alpha._1\ (3\ \alpha._1 + \sqrt{105\ \alpha._1^2 - 96\ \alpha._1\ \alpha._2 + 48\ \alpha._2^2})\ p^4}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	1



Quartic pole

Pole residue:	$0 < \frac{\alpha._1\ (-3\ \alpha._1 + \sqrt{105\ \alpha._1^2 - 96\ \alpha._1\ \alpha._2 + 48\ \alpha._2^2})\ p^4}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2}$ && $\frac{\alpha._1\ (-3\ \alpha._1 + \sqrt{105\ \alpha._1^2 - 96\ \alpha._1\ \alpha._2 + 48\ \alpha._2^2})\ p^4}{(\alpha._1 - \alpha._2)\ (3\ \alpha._1 - \alpha._2)\ \alpha._2} > 0$
Polarisations:	1



Hexic pole

Pole residue:	$0 < -\frac{\alpha._1^2\ p^6}{3\ \alpha._1^2\ \alpha._2 - 4\ \alpha._1\ \alpha._2^2 + \alpha._2^3}$ && $-\frac{\alpha._1^2\ p^6}{3\ \alpha._1^2\ \alpha._2 - 4\ \alpha._1\ \alpha._2^2 + \alpha._2^3} > 0$
Polarisations:	1

Unitarity conditions

(Demonstrably impossible)