

PSALter results panel

$$\mathcal{S} = \int \int \int \int \left(\mathcal{B}^\alpha \mathcal{T}_\alpha + \alpha_2 \partial_\alpha \mathcal{B}^\alpha \partial_\beta \mathcal{B}^\beta + \alpha_1 \partial_\beta \mathcal{B}_\alpha \partial^\beta \mathcal{B}^\alpha \right) [t, x, y, z] dz dy dx dt$$

Wave operator

$$\overset{\theta^+ \cdot \mathcal{B}}{\cdot \mathcal{B}} \uparrow \begin{matrix} \left(\alpha_1 + \alpha_2 \right) k^2 \\ \cdot \mathcal{B} \uparrow^\alpha \end{matrix} \begin{matrix} \overset{1^- \cdot \mathcal{B}}{\cdot \mathcal{B}} \alpha \\ \alpha_1 k^2 \end{matrix}$$

Saturated propagator

$$\overset{\theta^+ \cdot \mathcal{T}}{\cdot \mathcal{T}} \uparrow \begin{matrix} 1 \\ \left(\alpha_1 + \alpha_2 \right) k^2 \end{matrix} \begin{matrix} \overset{1^- \cdot \mathcal{T}}{\cdot \mathcal{T}} \alpha \\ \frac{1}{\alpha_1 k^2} \end{matrix}$$

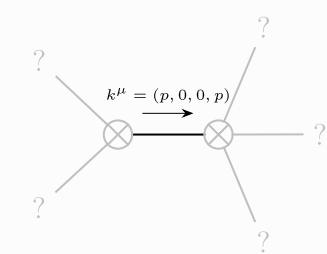
Source constraints

(There are no source constraints and no gauge symmetries)

Massive spectrum

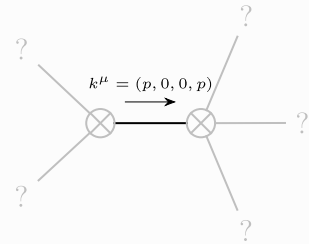
(There are no massive particles)

Massless spectrum



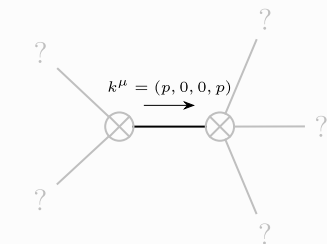
Massless particle

Pole residue:	$-\frac{1}{\alpha_1} - \frac{1}{\alpha_1 + \alpha_2} > 0$
Polarisations:	1



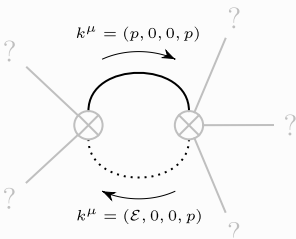
Massless particle

Pole residue:	$-\frac{1}{\alpha_1} > 0$
Polarisations:	2



Massless particle

Pole residue:	$\frac{1}{\alpha_1} + \frac{1}{\alpha_1 + \alpha_2} > 0$
Polarisations:	1



Quartic pole

Pole residue:	$0 < -\frac{\alpha_2 p^2}{\alpha_1 (\alpha_1 + \alpha_2)} \ \&\& \ -\frac{\alpha_2 p^2}{\alpha_1 (\alpha_1 + \alpha_2)} > 0$
Polarisations:	1

Gauge symmetries

(Not yet implemented in PSALter)

Unitarity conditions

(Unitarity is demonstrably impossible)

Validity assumptions

(Not yet implemented in PSALter)