## Wave operator and propagator

Particle spectrograph

## S ==

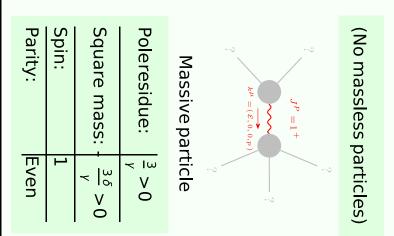
$$\iiint (\delta \mathcal{B}_{\alpha\beta} \mathcal{B}^{\alpha\beta} + \mathcal{B}^{\alpha\beta} \mathcal{J}_{\alpha\beta} + \frac{1}{3} \gamma (-2 \partial_{\beta} \mathcal{B}_{\alpha\chi} + \partial_{\chi} \mathcal{B}_{\alpha\beta}) \partial^{\chi} \mathcal{B}^{\alpha\beta})[t, x, y, z] dz$$

$$d y dx d t$$

$$\mathcal{J}_{1^{+} \alpha\beta}^{\#1} \mathcal{J}_{1^{-} \alpha}^{\#1} \qquad \mathcal{B}_{1^{+} \alpha\beta}^{\#1} \mathcal{B}_{1^{-} \alpha}^{\#1} \qquad \text{(No source constraints)}$$

$$\mathcal{J}_{1^{+}}^{\#1} + \alpha\beta \qquad 0 \qquad \frac{1}{\delta} \qquad \mathcal{B}_{1^{-}}^{\#1} + \alpha\beta \qquad 0 \qquad \delta$$

## **Massive and massless spectra**



## **Unitarity conditions**

$$\gamma > 0 \&\& \delta < 0$$