Particle spectrograph

Wave operator and propagator

Spin-parity form	Covariant form	Multiplicities
$0^{+}\mathcal{T}^{\#2} == 0$	$\partial_\beta\partial_\alpha\mathcal{T}^{\alpha\beta} == 0$	1
$1^{-}\mathcal{T}^{\#1\,\alpha} == 0$	$\partial_\chi\partial_\beta\partial^\alpha\mathcal{T}^{\beta\chi} == \partial_\chi\partial^\chi\partial_\beta\mathcal{T}^{\alpha\beta}$	3
Total expected gauge generators:		4

$$\begin{array}{c|cc} & 0^{+}\mathcal{T}^{\#1} & 0^{+}\mathcal{T}^{\#2} \\ \hline 0^{+}\mathcal{T}^{\#1\dagger} & \frac{1}{\alpha k^2} & 0 \\ 0^{+}\mathcal{T}^{\#2\dagger} & 0 & 0 \end{array} \qquad \begin{array}{c|c} & 1^{-}h^{\#1}_{\alpha} \\ \hline 1^{-}h^{\#1\dagger\,\alpha} & 0 \end{array}$$

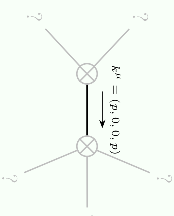
$$\begin{array}{c|cc} & 0^{+}h^{\#1} & 0^{+}h^{\#2} \\ \hline 0^{+}h^{\#1\dagger} & \alpha k^2 & 0 \\ 0^{+}h^{\#2\dagger} & 0 & 0 \end{array} \qquad \begin{array}{c|c} & 1^{-}\mathcal{T}^{\#1}_{\alpha} \\ \hline 1^{-}\mathcal{T}^{\#1\dagger\,\alpha} & 0 \end{array}$$

$$\begin{array}{c|c} & 2^{+}\mathcal{T}^{\#1}_{\alpha\beta} \\ \hline 2^{+}\mathcal{T}^{\#1\dagger\,\alpha\beta} & -\frac{2}{\alpha k^2} \end{array} \qquad \begin{array}{c|c} & 2^{+}h^{\#1}_{\alpha\beta} \\ \hline 2^{+}h^{\#1\dagger\,\alpha\beta} & -\frac{\alpha k^2}{2} \end{array}$$

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

Massive and massless spectra

Massless particle	
Pole residue:	$-\frac{1}{\alpha} > 0$
Polarisations:	2



(No particles)

Unitarity conditions