

Particle spectrograph

Wave operator and propagator

$\begin{matrix} \#^1 \\ 2^+ h^+ \end{matrix}$

$\alpha \tilde{k}$

$\begin{matrix} \#^1 \\ 1^+ \sigma^+ \end{matrix}$

α

$\begin{matrix} \#^1 \\ 1^+ h^+ \end{matrix}$

α

$\begin{matrix} \#^1 \\ 0^+ h^+ \end{matrix}$

$\alpha \tilde{k}$

$\begin{matrix} \#^1 \\ 1^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^1 \\ 1^+ h^+ \end{matrix}$

0

$\begin{matrix} \#^1 \\ 0^+ h^+ \end{matrix}$

$\alpha \tilde{k}$

$\begin{matrix} \#^2 \\ 0^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^2 \\ 0^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^1 \\ 0^+ h^+ \end{matrix}$

$4 \alpha \tilde{k}$

$\begin{matrix} \#^1 \\ 0^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^1 \\ 0^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^1 \\ 0^+ h^+ \end{matrix}$

$\sqrt{3} \alpha \tilde{k}$

$\begin{matrix} \#^1 \\ 0^+ \sigma^+ \end{matrix}$

$\sqrt{3} \alpha \tilde{k}$

$\begin{matrix} \#^2 \\ 0^+ \sigma^+ \end{matrix}$

$\frac{1}{\sqrt{3} \alpha \tilde{k}}$

$\begin{matrix} \#^2 \\ 0^+ h^+ \end{matrix}$

$\sqrt{3} \alpha \tilde{k}$

$\begin{matrix} \#^1 \\ 0^+ \sigma^+ \end{matrix}$

0

$\begin{matrix} \#^2 \\ 0^+ \sigma^+ \end{matrix}$

$-\frac{4}{3 \alpha \tilde{k}}$

$\begin{matrix} \#^1 \\ 2^+ \tau^+ \end{matrix}$

$\frac{1}{\alpha \tilde{k}}$

Spin-parity form

Covariant form

Multiplicities

$\begin{matrix} \#^1 \\ 1^+ \sigma^+ \end{matrix} \alpha = 0$

$\partial_\alpha \partial_\beta \partial^\alpha \sigma^{\beta\chi} = \partial_\alpha \partial_\beta \partial^\alpha \sigma^{\alpha\beta}$

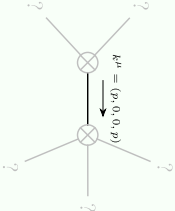
3

Total expected gauge generators: 3

$$S = \int \int \int \int (h^{\alpha\beta} \tau_{\alpha\beta} + \alpha \partial_\beta h^\chi_\chi \partial^\beta h^\alpha_\alpha + \alpha (-2 \partial_\beta h_{\alpha\chi} + \partial_\chi h_{\alpha\beta}) \partial^\chi h^{\alpha\beta}) [t, x, y, z] d^4x$$

Massive and massless spectra

(No particles)



Massless particle

Pole residue: $\frac{1}{\alpha} > 0$

Polarisations: 3

Unitarity conditions