Particle spectrograph

Wave operator and propagator

(Large matrix tables of wave operators and propagators with rows/columns labelled $\Delta_{0^+}^{\#1}$, $\Delta_{0^+}^{\#2}$, $\Delta_{0^+}^{\#3}$, $\Delta_{0^+}^{\#4}$, $\mathcal{T}_{0^+}^{\#1}$, $\mathcal{T}_{0^+}^{\#2}$, $\Delta_{0^-}^{\#1}$; $\Delta_{2^+}^{\#1}$, $\Delta_{2^+}^{\#2}$, $\Delta_{2^+}^{\#3}$, $\mathcal{T}_{2^+}^{\#1}$, $\Delta_{2^+}^{\#1}$, $\Delta_{2^-}^{\#2}$; Γ_{0^+}, h_{0^+} sectors; and spin-1 and spin-2 sectors.)

Source constraints

SO(3) irreps	Fundamental fields	Multiplicities
$\mathcal{T}_{0^+}^{\#2} == 0$	$\partial_\beta \partial_\alpha \mathcal{T}^{-\alpha\beta} == 0$	1
$\Delta_{0^+}^{\#3} + 2\,\Delta_{0^+}^{\#4} + 3\,\Delta_{0^+}^{\#2} == 0$	$\partial_\alpha \partial \Delta^\alpha{}_\beta == 0$	1
$\mathcal{T}_1^{\#1\alpha} == 0$	$\partial_\chi \partial \partial^\beta \mathcal{T}^{-\beta\chi} == \partial_\chi \partial^\chi \partial_\beta \mathcal{T}^{-\alpha\beta}$	3
$2\,\Delta_1^{\#6\alpha} + \Delta_1^{\#4\alpha} + 2\,\Delta_1^{\#5\alpha} + \Delta_1^{\#3\alpha} == 0$	$\partial_\beta \partial^\alpha \Delta^{\beta\chi}{}_\chi == \partial_\chi \partial^\chi \Delta^\alpha{}_\beta$	3
Total constraints/gauge generators:		8

Quadratic (free) action

$S ==$ (large multi-line expression for the quadratic free action, integrated $\int\int\int\int [\ldots]\, dz\, x, y, z]\, dx\, dy\, dz\, dt$)

Massive and massless spectra

`** MassiveAnalysisOfSector...Null`

Unitarity conditions