Field kinematics

Basic conventions

Minkowski metric tensor	Totally antisymmetric tensor	Momentum	Norm	Frame
$\eta_{\mu\nu}$	$\epsilon\,\eta_{\mu\nu\rho\sigma}$	k^{μ}	$k^2 == k_{\mu}\,k^{\mu}$	$n^{\mu} == \frac{k^{\mu}}{k}$

Fundamental fields

Fundamental field	Symmetries	Decomposition in SO(3) irreps	Source
$h_{\alpha\beta}$	Symmetry[2, $h^{\bullet 1\bullet 2}$, {●1 → -a, ●2 → -b}, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$\frac{1}{3}\,\eta_{\alpha\beta}\,h^{\#1}_{0^+} + h^{\#1}_{2^+\alpha\beta} + h^{\#1}_{1^-\beta}\,n_{\alpha} + h^{\#1}_{1^-\alpha}\,n_{\beta} - \frac{1}{3}\,h^{\#1}_{0^+}\,n_{\alpha}\,n_{\beta} + h^{\#2}_{0^+}\,n_{\alpha}\,n_{\beta}$	$\mathcal{T}_{\alpha\beta}$

SO(3) irreps

SO(3) irrep	Symmetries	Expansion in terms of the fundamental field	Source
$h^{\#1}_{0^+}$	Symmetry[0, $h^{\#1}_{0^+}$, {}, StrongGenSet[{}, GenSet[]]]	$h^{\alpha}{}_{\alpha} - h_{\alpha\beta}\,n^{\alpha}\,n^{\beta}$	$\mathcal{T}^{\#1}_{0^+}$
$h^{\#2}_{0^+}$	Symmetry[0, $h^{\#2}_{0^+}$, {}, StrongGenSet[{}, GenSet[]]]	$h_{\alpha\beta}\,n^{\alpha}\,n^{\beta}$	$\mathcal{T}^{\#2}_{0^+}$
$h^{\#1}_{2^+\alpha\beta}$	Symmetry[2, $h^{\#1\bullet 1\bullet 2}_{2^+}$, {●1 → -a, ●2 → -b}, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$h_{\alpha\beta} - \frac{1}{3}\,\eta_{\alpha\beta}\,h^{\chi}{}_{\chi} + \frac{1}{3}\,h^{\chi}{}_{\chi}\,n_{\alpha}\,n_{\beta} - h_{\beta\chi}\,n_{\alpha}\,n^{\chi} - h_{\alpha\chi}\,n_{\beta}\,n^{\chi} + \frac{1}{3}\,\eta_{\alpha\beta}\,h_{\chi\delta}\,n^{\chi}\,n^{\delta} + \frac{2}{3}\,h_{\chi\delta}\,n_{\alpha}\,n_{\beta}\,n^{\chi}\,n^{\delta}$	$\mathcal{T}^{\#1}_{2^+\alpha\beta}$
$h^{\#1}_{1^-\alpha}$	Symmetry[1, $h^{\#1\bullet 1}_{1^-}$, {●1 → -a}, StrongGenSet[{}, GenSet[]]]	$h_{\alpha\beta}\,n^{\beta} - h_{\beta\chi}\,n_{\alpha}\,n^{\beta}\,n^{\chi}$	$\mathcal{T}^{\#1}_{1^-\alpha}$