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
$f_{\alpha\beta}$	Symmetry[2, $f^{\bullet 1\bullet 2}$, {●1 → -a, ●2 → -b}, StrongGenSet[{}, GenSet[]]]	$\frac{1}{3}\,\eta_{\alpha\beta}\,f^{\#1}_{0^+} + f^{\#1}_{1^+\alpha\beta} + f^{\#1}_{2^+\alpha\beta} + f^{\#1}_{1^-\beta}\,n_{\alpha} + f^{\#2}_{1^-\alpha}\,n_{\beta} - \frac{1}{3}\,f^{\#1}_{0^+}\,n_{\alpha}\,n_{\beta} + f^{\#2}_{0^+}\,n_{\alpha}\,n_{\beta}$	$\tau_{\alpha\beta}$

SO(3) irreps

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