

# Field kinematics

Momentum	Norm	Frame
$k^\mu$	$k^2 == k_\mu k^\mu$	$n^\mu == \frac{k^\mu}{k}$

## Fundamental fields

Fundamental field	Symmetries	Decomposition in SO(3) irreps	Source
$f_{\alpha\beta}$	StrongGenSet[{}], GenSet[[]]	$\frac{1}{3} \eta_{\alpha\beta} f_{0^+}^{\#1} + f_{1^+ \alpha\beta}^{\#1} + f_{2^+ \alpha\beta}^{\#1} + f_{1^- \beta}^{\#1} n_\alpha + f_{1^- \alpha}^{\#2} n_\beta - \frac{1}{3} f_{0^+}^{\#1} n_\alpha n_\beta + f_{0^+}^{\#2} n_\alpha n_\beta$	$\tau_{\alpha\beta}$

## SO(3) irreps

SO(3) irrep	Symmetries	Expansion in fundamental field	Source
$f_{0^+}^{\#1}$	StrongGenSet[{}], GenSet[[]]	$f^\alpha_\alpha - f^{\alpha\beta} n_\alpha n_\beta$	$\tau_{0^+}^{\#1}$
$f_{0^+}^{\#2}$	StrongGenSet[{}], GenSet[[]]	$f^{\alpha\beta} n_\alpha n_\beta$	$\tau_{0^+}^{\#2}$
$f_{1^+ \alpha\beta}^{\#1}$	StrongGenSet[{1, 2}], GenSet[-(1,2)][]	$\frac{f_{\alpha\beta}}{2} - \frac{f_{\beta\alpha}}{2} + \frac{1}{2} f^\chi_\beta n_\alpha n_\chi - \frac{1}{2} f^\chi_\beta n_\alpha n_\chi - \frac{1}{2} f^\chi_\alpha n_\beta n_\chi + \frac{1}{2} f^\chi_\alpha n_\beta n_\chi$	$\tau_{1^+ \alpha\beta}^{\#1}$
$f_{1^- \alpha}^{\#1}$	StrongGenSet[{}], GenSet[[]]	$f^\beta_\alpha n_\beta - f^{\beta\chi} n_\alpha n_\beta n_\chi$	$\tau_{1^- \alpha}^{\#1}$
$f_{1^- \alpha}^{\#2}$	StrongGenSet[{}], GenSet[[]]	$f^\beta_\alpha n_\beta - f^{\beta\chi} n_\alpha n_\beta n_\chi$	$\tau_{1^- \alpha}^{\#2}$
$f_{2^+ \alpha\beta}^{\#1}$	StrongGenSet[{1, 2}], GenSet[(1,2)][]	$\frac{f_{\alpha\beta}}{2} + \frac{f_{\beta\alpha}}{2} - \frac{1}{3} \eta_{\alpha\beta} f^\chi_\chi + \frac{1}{3} f^\chi_\chi n_\alpha n_\beta - \frac{1}{2} f^\chi_\beta n_\alpha n_\chi - \frac{1}{2} f^\chi_\beta n_\alpha n_\chi - \frac{1}{2} f^\chi_\beta n_\alpha n_\chi - \frac{1}{2} f^\chi_\alpha n_\beta n_\chi - \frac{1}{2} f^\chi_\alpha n_\beta n_\chi + \frac{1}{3} \eta_{\alpha\beta} f^{\chi\delta} n_\chi n_\delta + \frac{2}{3} f^{\chi\delta} n_\alpha n_\beta n_\chi n_\delta$	$\tau_{2^+ \alpha\beta}^{\#1}$