

# Field kinematics

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

## Fundamental fields

Fields	Symmetries	SO(3)	Sources
$f_{\alpha\beta}$	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)	Symmetries	Expansion	Sources
$f_{0^+}^{\#1}$	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)]]	$\frac{f_{\alpha\beta}}{2} - \frac{f_{\beta\alpha}}{2} + \frac{1}{2} f_\beta^\chi \, n_\alpha \, n_\chi - \frac{1}{2} f_\beta^\chi \, n_\alpha \, n_\chi - \frac{1}{2} f_\alpha^\chi \, n_\beta \, n_\chi + \frac{1}{2} f_\alpha^\chi \, n_\beta \, n_\chi$	$\tau_{1^+ \alpha\beta}^{\#1}$
$f_{1^- \alpha}^{\#1}$	StrongGenSet[{}], GenSet[]]	$f_\alpha^\beta \, n_\beta - f^{\beta\chi} \, n_\alpha \, n_\beta \, n_\chi$	$\tau_{1^- \alpha}^{\#1}$
$f_{1^- \alpha}^{\#2}$	StrongGenSet[{}], GenSet[]]	$f_\alpha^\beta \, n_\beta - f^{\beta\chi} \, n_\alpha \, n_\beta \, n_\chi$	$\tau_{1^- \alpha}^{\#2}$
$f_{2^+ \alpha\beta}^{\#1}$	StrongGenSet[{1, 2}], GenSet[(1,2)]]	$\frac{f_{\alpha\beta}}{2} + \frac{f_{\beta\alpha}}{2} - \frac{1}{3} \, \eta_{\alpha\beta} \, f_\chi^\chi + \frac{1}{3} f_\chi^\chi \, n_\alpha \, n_\beta - \frac{1}{2} f_\beta^\chi \, n_\alpha \, n_\chi - \frac{1}{2} f_\beta^\chi \, n_\alpha \, n_\chi - \frac{1}{2} f_\alpha^\chi \, n_\beta \, n_\chi - \frac{1}{2} f_\alpha^\chi \, n_\beta \, n_\chi + \frac{1}{3} \, \eta_{\alpha\beta} \, f^{\chi\delta} \, n_\chi \, n_\delta + \frac{2}{3} f^{\chi\delta} \, n_\alpha \, n_\beta \, n_\chi \, n_\delta$	$\tau_{2^+ \alpha\beta}^{\#1}$