Field kinematics

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

Fundamental fields

Fundamental field	Symmetries	Decomposition in SO(3) irreps	Source
$\mathcal{A}_{\alpha\beta\chi}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$-\frac{1}{2}\,\eta_{\beta\chi}\,\mathcal{A}^{\#1}_{1^-\ \alpha} + \frac{1}{2}\,\eta_{\alpha\chi}\,\mathcal{A}^{\#1}_{1^-\ \beta} + \frac{4}{3}\,\mathcal{A}^{\#1}_{2^-\ \alpha\beta\chi} +$ $\frac{1}{3}\,\eta_{\beta\chi}\,\mathcal{A}^{\#1}_{0^+}\,n_\alpha + \mathcal{A}^{\#1}_{1^+\ \beta\chi}\,n_\alpha + \mathcal{A}^{\#1}_{2^+\ \beta\chi}\,n_\alpha - \frac{1}{3}\,\eta_{\alpha\chi}\,\mathcal{A}^{\#1}_{0^+}\,n_\beta -$ $\mathcal{A}^{\#1}_{1^+\ \alpha\chi}\,n_\beta - \mathcal{A}^{\#1}_{2^+\ \alpha\chi}\,n_\beta + \mathcal{A}^{\#2}_{1^+\ \alpha\beta}\,n_\chi - \frac{1}{2}\,\mathcal{A}^{\#1}_{1^-\ \beta}\,n_\alpha\,n_\chi -$ $\mathcal{A}^{\#2}_{1^-\ \beta}\,n_\alpha\,n_\chi + \frac{1}{2}\,\mathcal{A}^{\#1}_{1^-\ \alpha}\,n_\beta\,n_\chi + \mathcal{A}^{\#2}_{1^-\ \alpha}\,n_\beta\,n_\chi - \frac{1}{6}\,\epsilon\eta_{\alpha\beta\chi\delta}\,\mathcal{A}^{\#1}_{0^-}\,n^\delta$	$\sigma_{\alpha\beta\chi}$

SO(3) irreps

SO(3) irrep	Symmetries	Expansion in fundamental field	Source
$\mathcal{A}^{\#1}_{0^+}$	StrongGenSet[{}, GenSet[]]	$\mathcal{A}_{\alpha\ \ \beta}^{\ \ \beta}\,n^\alpha$	$\sigma^{\#1}_{0^+}$
$\mathcal{A}^{\#1}_{0^-}$	StrongGenSet[{}, GenSet[]]	$-\epsilon\eta_{\alpha\beta\chi\delta}\,\mathcal{A}^{\beta\chi\delta}\,n^\alpha$	$\sigma^{\#1}_{0^-}$
$\mathcal{A}^{\#1}_{1^+\ \alpha\beta}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$-\frac{1}{2}\,\mathcal{A}_{\alpha\chi\beta}\,n^\chi + \frac{1}{2}\,\mathcal{A}_{\beta\chi\alpha}\,n^\chi - \frac{1}{2}\,\mathcal{A}_{\beta\chi\delta}\,n_\alpha\,n^\chi\,n^\delta + \frac{1}{2}\,\mathcal{A}_{\alpha\chi\delta}\,n_\beta\,n^\chi\,n^\delta$	$\sigma^{\#1}_{1^+\ \alpha\beta}$
$\mathcal{A}^{\#2}_{1^+\ \alpha\beta}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\mathcal{A}_{\alpha\beta\chi}\,n^\chi + \mathcal{A}_{\beta\chi\delta}\,n_\alpha\,n^\chi\,n^\delta - \mathcal{A}_{\alpha\chi\delta}\,n_\beta\,n^\chi\,n^\delta$	$\sigma^{\#2}_{1^+\ \alpha\beta}$
$\mathcal{A}^{\#1}_{1^-\ \alpha}$	StrongGenSet[{}, GenSet[]]	$-\mathcal{A}_{\alpha\ \ \beta}^{\ \ \beta} + \mathcal{A}_{\beta\ \ \chi}^{\ \ \chi}\,n_\alpha\,n^\beta + \mathcal{A}_{\alpha\beta\chi}\,n^\beta\,n^\chi$	$\sigma^{\#1}_{1^-\ \alpha}$
$\mathcal{A}^{\#2}_{1^-\ \alpha}$	StrongGenSet[{}, GenSet[]]	$\mathcal{A}_{\alpha\beta\chi}\,n^\beta\,n^\chi$	$\sigma^{\#2}_{1^-\ \alpha}$
$\mathcal{A}^{\#1}_{2^+\ \alpha\beta}$	StrongGenSet[{1, 2}, GenSet[(1,2)]]	$-\frac{1}{2}\,\mathcal{A}_{\alpha\chi\beta}\,n^\chi - \frac{1}{2}\,\mathcal{A}_{\beta\chi\alpha}\,n^\chi - \frac{1}{3}\,\eta_{\alpha\beta}\,\mathcal{A}_{\chi\ \ \delta}^{\ \ \delta}\,n^\chi +$ $\frac{1}{3}\,\mathcal{A}_{\chi\ \ \delta}^{\ \ \delta}\,n_\alpha\,n_\beta\,n^\chi + \frac{1}{2}\,\mathcal{A}_{\beta\chi\delta}\,n_\alpha\,n^\chi\,n^\delta + \frac{1}{2}\,\mathcal{A}_{\alpha\chi\delta}\,n_\beta\,n^\chi\,n^\delta$	$\sigma^{\#1}_{2^+\ \alpha\beta}$
$\mathcal{A}^{\#1}_{2^-\ \alpha\beta\chi}$	StrongGenSet[{1, 2}, GenSet[-(1,2)]]	$\frac{1}{2}\,\mathcal{A}_{\alpha\beta\chi} + \frac{1}{4}\,\mathcal{A}_{\alpha\chi\beta} - \frac{3}{8}\,\eta_{\beta\chi}\,\mathcal{A}_{\alpha\ \ \delta}^{\ \ \delta} - \frac{1}{4}\,\mathcal{A}_{\beta\chi\alpha} + \frac{3}{8}\,\eta_{\alpha\chi}\,\mathcal{A}_{\beta\ \ \delta}^{\ \ \delta} -$ $\frac{3}{8}\,\mathcal{A}_{\beta\ \ \delta}^{\ \ \delta}\,n_\alpha\,n_\chi + \frac{3}{8}\,\mathcal{A}_{\alpha\ \ \delta}^{\ \ \delta}\,n_\beta\,n_\chi + \frac{1}{4}\,\mathcal{A}_{\beta\chi\delta}\,n_\alpha\,n^\delta + \frac{1}{2}\,\mathcal{A}_{\beta\delta\chi}\,n_\alpha\,n^\delta +$ $\frac{1}{4}\,\mathcal{A}_{\chi\delta\beta}\,n_\alpha\,n^\delta + \frac{3}{8}\,\eta_{\beta\chi}\,\mathcal{A}_{\delta\ \ \epsilon}^{\ \ \epsilon}\,n_\alpha\,n^\delta - \frac{1}{4}\,\mathcal{A}_{\alpha\chi\delta}\,n_\beta\,n^\delta -$ $\frac{1}{2}\,\mathcal{A}_{\alpha\delta\chi}\,n_\beta\,n^\delta - \frac{1}{4}\,\mathcal{A}_{\chi\delta\alpha}\,n_\beta\,n^\delta - \frac{3}{8}\,\eta_{\alpha\chi}\,\mathcal{A}_{\delta\ \ \epsilon}^{\ \ \epsilon}\,n_\beta\,n^\delta - \frac{1}{2}\,\mathcal{A}_{\alpha\beta\delta}\,n_\chi\,n^\delta -$ $\frac{1}{4}\,\mathcal{A}_{\alpha\delta\beta}\,n_\chi\,n^\delta + \frac{1}{4}\,\mathcal{A}_{\beta\delta\alpha}\,n_\chi\,n^\delta + \frac{3}{8}\,\eta_{\beta\chi}\,\mathcal{A}_{\alpha\delta\epsilon}\,n^\delta\,n^\epsilon -$ $\frac{3}{8}\,\eta_{\alpha\chi}\,\mathcal{A}_{\beta\delta\epsilon}\,n^\delta\,n^\epsilon - \frac{3}{8}\,\mathcal{A}_{\beta\delta\epsilon}\,n_\alpha\,n_\chi\,n^\delta\,n^\epsilon + \frac{3}{8}\,\mathcal{A}_{\alpha\delta\epsilon}\,n_\beta\,n_\chi\,n^\delta\,n^\epsilon$	$\sigma^{\#1}_{2^-\ \alpha\beta\chi}$