

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
$\Gamma_{\alpha\beta\chi}$	Symmetry[3, $\Gamma^{\bullet 1 \bullet 2 \bullet 3}$, { $\bullet 1 \rightarrow -a$, $\bullet 2 \rightarrow -b$, $\bullet 3 \rightarrow -c$ }, StrongGenSet[{}], GenSet[{}]]	$-\frac{1}{2} \eta_{\alpha\chi} \Gamma^{\#1}_{1^-} \beta + \frac{1}{2} \eta_{\alpha\beta} \Gamma^{\#1}_{1^-} \chi + \frac{4}{3} \Gamma^{\#1}_{2^+} \beta \chi \alpha + \frac{1}{2} \Gamma^{\#2}_{2^+} \alpha \beta \chi + \frac{1}{2} \Gamma^{\#2}_{2^+} \alpha \chi \beta + \Gamma^{\#1}_{3^+} \alpha \beta \chi + \frac{1}{3} \eta_{\beta\chi} \Gamma^{\#6}_{1^-} \alpha - \frac{1}{6} \eta_{\alpha\chi} \Gamma^{\#6}_{1^-} \beta - \frac{1}{6} \eta_{\alpha\beta} \Gamma^{\#6}_{1^-} \chi + \frac{1}{15} \eta_{\beta\chi} \Gamma^{\#4}_{1^+} \alpha + \frac{1}{15} \eta_{\alpha\chi} \Gamma^{\#4}_{1^+} \beta + \frac{1}{15} \eta_{\alpha\beta} \Gamma^{\#4}_{1^+} \chi +$ $\Gamma^{\#2}_{1^+} \beta \chi \ n_{\alpha} + \frac{1}{9} \eta_{\beta\chi} \Gamma^{\#3}_{0^+} n_{\alpha} + \frac{1}{3} \Gamma^{\#2}_{2^+} \beta \chi \ n_{\alpha} + \frac{2}{3} \Gamma^{\#3}_{2^+} \beta \chi \ n_{\alpha} + \frac{2}{9} \eta_{\beta\chi} \Gamma^{\#4}_{0^+} n_{\alpha} + \frac{1}{3} \eta_{\alpha\chi} \Gamma^{\#1}_{1^-} n_{\beta} - \Gamma^{\#1}_{1^+} \alpha \chi \ n_{\beta} + \Gamma^{\#1}_{2^+} \alpha \chi \ n_{\beta} + \frac{1}{9} \eta_{\alpha\chi} \Gamma^{\#3}_{0^+} n_{\beta} - \frac{1}{2} \Gamma^{\#3}_{1^+} \alpha \chi \ n_{\beta} + \frac{1}{3} \Gamma^{\#2}_{2^+} \alpha \chi \ n_{\beta} -$ $\frac{1}{3} \Gamma^{\#3}_{2^+} \alpha \chi \ n_{\beta} - \frac{1}{9} \eta_{\alpha\chi} \Gamma^{\#4}_{0^+} n_{\beta} - \frac{1}{2} \Gamma^{\#1}_{1^-} \chi \ n_{\alpha} \ n_{\beta} - \Gamma^{\#2}_{1^+} \chi \ n_{\alpha} \ n_{\beta} + \frac{1}{6} \Gamma^{\#6}_{1^-} \chi \ n_{\alpha} \ n_{\beta} - \frac{1}{15} \Gamma^{\#4}_{1^+} \chi \ n_{\alpha} \ n_{\beta} - \frac{1}{3} \Gamma^{\#5}_{1^+} \chi \ n_{\alpha} \ n_{\beta} + \frac{1}{3} \Gamma^{\#3}_{1^+} \chi \ n_{\alpha} \ n_{\beta} - \frac{1}{3} \eta_{\alpha\beta} \Gamma^{\#1}_{0^+} n_{\chi} + \Gamma^{\#1}_{1^+} a \beta \ n_{\chi} -$ $\Gamma^{\#1}_{2^+} a \beta \ n_{\chi} + \frac{1}{9} \eta_{\alpha\beta} \Gamma^{\#3}_{0^+} n_{\chi} - \frac{1}{2} \Gamma^{\#3}_{1^+} a \beta \ n_{\chi} + \frac{1}{3} \Gamma^{\#2}_{2^+} a \beta \ n_{\chi} - \frac{1}{3} \Gamma^{\#2}_{2^+} a \beta \ n_{\chi} - \frac{1}{9} \eta_{\alpha\beta} \Gamma^{\#4}_{0^+} n_{\chi} + \frac{1}{2} \Gamma^{\#1}_{1^-} \beta \ n_{\alpha} \ n_{\chi} + \frac{1}{2} \Gamma^{\#2}_{1^+} \beta \ n_{\alpha} \ n_{\chi} + \frac{1}{6} \Gamma^{\#6}_{1^-} \beta \ n_{\alpha} \ n_{\chi} - \frac{1}{15} \Gamma^{\#4}_{1^+} \beta \ n_{\alpha} \ n_{\chi} -$ $\frac{1}{3} \Gamma^{\#5}_{1^+} \beta \ n_{\alpha} \ n_{\chi} + \frac{1}{3} \Gamma^{\#3}_{1^+} \beta \ n_{\alpha} \ n_{\chi} - \frac{1}{3} \Gamma^{\#6}_{1^+} \alpha \ n_{\beta} \ n_{\chi} - \frac{1}{15} \Gamma^{\#4}_{1^+} \alpha \ n_{\beta} \ n_{\chi} + \frac{2}{3} \Gamma^{\#5}_{1^+} \alpha \ n_{\beta} \ n_{\chi} + \frac{1}{3} \Gamma^{\#3}_{1^+} \alpha \ n_{\beta} \ n_{\chi} - \frac{1}{3} \Gamma^{\#3}_{0^+} n_{\alpha} \ n_{\beta} \ n_{\chi} + \Gamma^{\#2}_{2^+} n_{\alpha} \ n_{\beta} \ n_{\chi} - \frac{1}{6} \epsilon \eta_{\alpha\beta\chi\delta} \Gamma^{\#1}_{0^+} n^{\delta}$	$\Delta_{\alpha\beta\chi}$

SO(3) irreps

SO(3) irrep	Symmetries	Expansion in terms of the fundamental field	Source
$\Gamma_{0^+}^{\#1}$	Symmetry[0, $\Gamma_{0^+}^{\#1}$, {}, StrongGenSet[{}, GenSet[]]]	$-\frac{1}{2}\Gamma_{\alpha}^{\alpha\beta}n_{\beta}+\frac{1}{2}\Gamma_{\alpha}^{\alpha\beta}n_{\beta}$	$\Delta_{0^+}^{\#1}$
$\Gamma_{0^+}^{\#2}$	Symmetry[0, $\Gamma_{0^+}^{\#2}$, {}, StrongGenSet[{}, GenSet[]]]	$\Gamma^{\alpha\beta\chi}_{\alpha}n_{\beta}n_{\chi}$	$\Delta_{0^+}^{\#2}$
$\Gamma_{0^+}^{\#3}$	Symmetry[0, $\Gamma_{0^+}^{\#3}$, {}, StrongGenSet[{}, GenSet[]]]	$\Gamma^{\alpha\beta}_{\beta}n_{\alpha}+\Gamma_{\alpha}^{\alpha\beta}n_{\beta}+\Gamma_{\alpha}^{\alpha\beta}n_{\beta}-3\Gamma^{\alpha\beta\chi}_{\alpha}n_{\alpha}n_{\beta}n_{\chi}$	$\Delta_{0^+}^{\#3}$
$\Gamma_{0^+}^{\#4}$	Symmetry[0, $\Gamma_{0^+}^{\#4}$, {}, StrongGenSet[{}, GenSet[]]]	$\Gamma^{\alpha\beta}_{\beta}n_{\alpha}-\frac{1}{2}\Gamma_{\alpha}^{\alpha\beta}n_{\beta}-\frac{1}{2}\Gamma_{\alpha}^{\alpha\beta}n_{\beta}$	$\Delta_{0^+}^{\#4}$
$\Gamma_{0^-}^{\#1}$	Symmetry[0, $\Gamma_{0^-}^{\#1}$, {}, StrongGenSet[{}, GenSet[]]]	$\epsilon\eta_{\alpha\beta\chi\delta}\Gamma^{\alpha\beta\chi}_{\alpha}n^{\delta}$	$\Delta_{0^-}^{\#1}$
$\Gamma_{1^+}^{\#1\alpha\beta}$	Symmetry[2, $\Gamma_{1^+}^{\#1\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$\frac{1}{4}\Gamma_{\alpha\beta}^{\chi}n_{\chi}-\frac{1}{4}\Gamma_{\alpha}^{\chi\beta}n_{\chi}-\frac{1}{4}\Gamma_{\beta\alpha}^{\chi}n_{\chi}+\frac{1}{4}\Gamma_{\beta}^{\chi\alpha}n_{\chi}-\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}+\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}+\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{1^+}^{\#1\alpha\beta}$
$\Gamma_{1^+}^{\#2\alpha\beta}$	Symmetry[2, $\Gamma_{1^+}^{\#2\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$\frac{1}{2}\Gamma_{\alpha\beta}^{\chi}n_{\chi}-\frac{1}{2}\Gamma_{\beta\alpha}^{\chi}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\frac{1}{2}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{1^+}^{\#2\alpha\beta}$
$\Gamma_{1^+}^{\#3\alpha\beta}$	Symmetry[2, $\Gamma_{1^+}^{\#3\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$-\frac{1}{2}\Gamma_{\alpha\beta}^{\chi}n_{\chi}-\frac{1}{2}\Gamma_{\alpha}^{\chi\beta}n_{\chi}+\frac{1}{2}\Gamma_{\beta\alpha}^{\chi}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\chi\alpha}n_{\chi}-\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}+\frac{1}{2}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}-\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{1^+}^{\#3\alpha\beta}$
$\Gamma_{1^-}^{\#1\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#1\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$-\frac{1}{2}\Gamma_{\alpha\beta}^{\chi}n_{\chi}+\frac{1}{2}\Gamma_{\beta\alpha}^{\chi}n_{\chi}-\frac{1}{2}\Gamma_{\beta}^{\chi\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}-\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}$	$\Delta_{1^-}^{\#1\alpha}$
$\Gamma_{1^-}^{\#2\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#2\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$\frac{1}{2}\Gamma_{\alpha}^{\chi\beta}n_{\beta}n_{\chi}-\frac{1}{2}\Gamma_{\alpha}^{\chi\beta}n_{\beta}n_{\chi}$	$\Delta_{1^-}^{\#2\alpha}$
$\Gamma_{1^-}^{\#3\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#3\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}+\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}+\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}-3\Gamma^{\beta\chi\delta}_{\alpha}n_{\alpha}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{1^-}^{\#3\alpha}$
$\Gamma_{1^-}^{\#4\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#4\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$\Gamma_{\alpha}^{\beta\chi}n_{\beta}+\Gamma_{\alpha\beta}^{\beta\chi}n_{\beta}+\Gamma_{\beta\alpha}^{\beta\chi}n_{\beta}n_{\chi}-\Gamma_{\beta}^{\beta\chi}n_{\alpha}n_{\chi}-\Gamma_{\beta}^{\beta\chi}n_{\alpha}n_{\chi}-\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}-\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}+3\Gamma^{\beta\chi\delta}_{\alpha}n_{\alpha}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{1^-}^{\#4\alpha}$
$\Gamma_{1^-}^{\#5\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#5\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}-\frac{1}{2}\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}-\frac{1}{2}\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}$	$\Delta_{1^-}^{\#5\alpha}$
$\Gamma_{1^-}^{\#6\alpha}$	Symmetry[1, $\Gamma_{1^-}^{\#6\bullet1}$, { $\bullet1\rightarrow -a$ }, StrongGenSet[{}, GenSet[]]]	$\Gamma_{\alpha}^{\beta\chi}n_{\beta}-\frac{1}{2}\Gamma_{\alpha\beta}^{\beta\chi}n_{\beta}-\frac{1}{2}\Gamma_{\beta\alpha}^{\beta\chi}n_{\beta}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\beta\chi}n_{\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\beta\chi}n_{\alpha}n_{\chi}-\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\beta\chi}n_{\beta}n_{\chi}$	$\Delta_{1^-}^{\#6\alpha}$
$\Gamma_{2^+}^{\#1\alpha\beta}$	Symmetry[2, $\Gamma_{2^+}^{\#1\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$-\frac{1}{4}\Gamma_{\alpha\beta}^{\chi}n_{\chi}+\frac{1}{4}\Gamma_{\alpha}^{\chi\beta}n_{\chi}-\frac{1}{4}\Gamma_{\beta\alpha}^{\chi}n_{\chi}+\frac{1}{4}\Gamma_{\beta}^{\chi\alpha}n_{\chi}+\frac{1}{6}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}-\frac{1}{6}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}-\frac{1}{6}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{6}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}+\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{2^+}^{\#1\alpha\beta}$
$\Gamma_{2^+}^{\#2\alpha\beta}$	Symmetry[2, $\Gamma_{2^+}^{\#2\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$\frac{1}{2}\Gamma_{\alpha\beta}^{\chi}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\chi\beta}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\chi\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}+\frac{1}{2}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}+\frac{1}{3}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}-\frac{1}{3}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}-\frac{1}{3}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}+\frac{1}{3}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{3}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}-\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}-\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{2^+}^{\#2\alpha\beta}$
$\Gamma_{2^+}^{\#3\alpha\beta}$	Symmetry[2, $\Gamma_{2^+}^{\#3\bullet1\bullet2}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$ }, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$-\frac{1}{4}\Gamma_{\alpha\beta}^{\chi}n_{\chi}-\frac{1}{4}\Gamma_{\alpha}^{\chi\beta}n_{\chi}-\frac{1}{4}\Gamma_{\beta\alpha}^{\chi}n_{\chi}-\frac{1}{4}\Gamma_{\beta}^{\chi\alpha}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}+\frac{1}{2}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}-\frac{1}{3}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}+\frac{1}{3}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{6}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}+\frac{1}{6}\eta_{\alpha\beta}\Gamma_{\chi}^{\chi\delta}n_{\delta}-\frac{1}{6}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{6}\Gamma_{\chi}^{\chi\delta}n_{\alpha}n_{\beta}n_{\delta}+\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\beta}^{\chi\delta}n_{\alpha}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\alpha}^{\chi\delta}n_{\beta}n_{\chi}n_{\delta}$	$\Delta_{2^+}^{\#3\alpha\beta}$
$\Gamma_{2^-}^{\#1\alpha\beta\chi}$	Symmetry[3, $\Gamma_{2^-}^{\#1\bullet1\bullet2\bullet3}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$, $\bullet3\rightarrow -c$ }, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$-\frac{1}{8}\Gamma_{\alpha\beta\chi}+\frac{1}{8}\Gamma_{\alpha\chi\beta}+\frac{1}{8}\Gamma_{\beta\alpha\chi}-\frac{1}{8}\Gamma_{\beta\chi\alpha}+\frac{1}{4}\Gamma_{\chi\alpha\beta}-\frac{1}{4}\Gamma_{\chi\beta\alpha}-\frac{3}{16}\eta_{\beta\chi}\Gamma^{\delta\delta}_{\alpha\delta}+\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\delta}_{\beta\delta}+\frac{1}{16}\eta_{\beta\chi}\Gamma^{\delta\delta}_{\delta\alpha}-\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\delta}_{\delta\beta}-\frac{3}{16}\Gamma^{\delta\delta}_{\beta\delta}n_{\alpha}n_{\chi}+\frac{3}{16}\Gamma^{\delta\delta}_{\delta\beta}n_{\alpha}n_{\chi}+\frac{3}{16}\Gamma^{\delta\delta}_{\alpha\delta}n_{\beta}n_{\chi}-\frac{3}{16}\Gamma^{\delta\delta}_{\delta\alpha}n_{\beta}n_{\chi}+\frac{1}{8}\Gamma_{\beta\chi}^{\delta}n_{\alpha}n_{\delta}-\frac{1}{8}\Gamma_{\beta}^{\delta}n_{\alpha}n_{\delta}+\frac{1}{4}\Gamma_{\chi\beta}^{\delta}n_{\alpha}n_{\delta}-\frac{1}{4}\Gamma_{\chi}^{\delta}n_{\alpha}n_{\delta}+\frac{1}{8}\Gamma^{\delta\delta}_{\beta\chi}n_{\alpha}n_{\delta}-\frac{1}{8}\Gamma^{\delta\delta}_{\chi\beta}n_{\alpha}n_{\delta}-\frac{1}{8}\Gamma_{\alpha\chi}^{\delta}n_{\beta}n_{\delta}+\frac{1}{8}\Gamma_{\alpha}^{\delta}n_{\beta}n_{\delta}-\frac{1}{4}\Gamma_{\chi\alpha}^{\delta}n_{\beta}n_{\delta}+\frac{1}{4}\Gamma_{\chi}^{\delta}n_{\alpha}n_{\beta}n_{\delta}-\frac{1}{8}\Gamma^{\delta\delta}_{\alpha\chi}n_{\beta}n_{\delta}+\frac{1}{8}\Gamma^{\delta\delta}_{\chi\alpha}n_{\beta}n_{\delta}+\frac{1}{8}\Gamma_{\alpha\beta}^{\delta}n_{\chi}n_{\delta}-\frac{1}{8}\Gamma_{\alpha}^{\delta}n_{\chi}n_{\delta}-\frac{1}{8}\Gamma_{\beta\alpha}^{\delta}n_{\chi}n_{\delta}+\frac{1}{8}\Gamma_{\beta}^{\delta}n_{\chi}n_{\delta}-\frac{1}{8}\Gamma_{\alpha\chi}^{\delta}n_{\beta}n_{\delta}+\frac{1}{8}\Gamma_{\alpha}^{\delta}n_{\chi}n_{\delta}-\frac{1}{4}\Gamma_{\alpha\beta}^{\delta}n_{\chi}n_{\delta}+\frac{1}{4}\Gamma_{\beta\alpha}^{\delta}n_{\chi}n_{\delta}-\frac{3}{16}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\alpha}n_{\epsilon}+\frac{3}{16}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\alpha}n_{\epsilon}+\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\beta}n_{\epsilon}-\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\beta}n_{\epsilon}+\frac{3}{16}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\alpha}n_{\epsilon}-\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\beta}n_{\delta}n_{\epsilon}+\frac{3}{16}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\beta}n_{\delta}n_{\epsilon}-\frac{3}{16}\Gamma^{\delta\epsilon}_{\beta}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{3}{16}\Gamma^{\delta\epsilon}_{\beta}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{3}{16}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{3}{16}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}$	$\Delta_{2^-}^{\#1\alpha\beta\chi}$
$\Gamma_{2^-}^{\#2\alpha\beta\chi}$	Symmetry[3, $\Gamma_{2^-}^{\#2\bullet1\bullet2\bullet3}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$, $\bullet3\rightarrow -c$ }, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$\frac{1}{3}\Gamma_{\alpha\beta\chi}+\frac{1}{3}\Gamma_{\alpha\chi\beta}-\frac{1}{3}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\delta}-\frac{1}{3}\Gamma_{\beta\alpha\chi}-\frac{1}{3}\Gamma_{\beta\chi\alpha}+\frac{1}{3}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\delta}+\frac{1}{6}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\delta}-\frac{1}{6}\eta_{\alpha\chi}\Gamma_{\delta}^{\delta\delta}+\frac{1}{6}\eta_{\beta\chi}\Gamma_{\delta\alpha}^{\delta\delta}-\frac{1}{6}\eta_{\alpha\chi}\Gamma_{\delta\beta}^{\delta\delta}-\frac{1}{3}\Gamma_{\beta}^{\delta\delta}n_{\alpha}n_{\chi}+\frac{1}{6}\Gamma_{\alpha\beta}^{\delta\delta}n_{\alpha}n_{\chi}+\frac{1}{6}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\chi}-\frac{1}{6}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\chi}-\frac{1}{6}\Gamma_{\delta\alpha}^{\delta\delta}n_{\beta}n_{\chi}+\frac{1}{3}\Gamma_{\beta\chi}^{\delta\delta}n_{\alpha}n_{\delta}+\frac{1}{3}\Gamma_{\beta}^{\delta\delta}n_{\alpha}n_{\delta}-\frac{1}{3}\Gamma_{\delta\beta}^{\delta\delta}n_{\alpha}n_{\delta}+\frac{1}{3}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\epsilon}n_{\alpha}n_{\delta}-\frac{1}{3}\Gamma_{\alpha\chi}^{\delta\delta}n_{\beta}n_{\delta}-\frac{1}{3}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\delta}+\frac{1}{3}\Gamma^{\delta\delta}_{\chi\alpha}n_{\beta}n_{\delta}-\frac{1}{3}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\epsilon}n_{\beta}n_{\delta}-\frac{1}{3}\Gamma_{\alpha\beta}^{\delta\delta}n_{\chi}n_{\delta}-\frac{1}{3}\Gamma_{\alpha}^{\delta\delta}n_{\chi}n_{\delta}+\frac{1}{3}\Gamma_{\beta\alpha}^{\delta\delta}n_{\chi}n_{\delta}+\frac{1}{3}\Gamma_{\beta}^{\delta\delta}n_{\chi}n_{\delta}-\frac{1}{6}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\alpha}n_{\epsilon}-\frac{1}{6}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\alpha}n_{\epsilon}+\frac{1}{6}\eta_{\alpha\chi}\Gamma_{\delta}^{\delta\epsilon}n_{\beta}n_{\epsilon}+\frac{1}{6}\eta_{\alpha\chi}\Gamma_{\delta}^{\delta\epsilon}n_{\beta}n_{\epsilon}+\frac{1}{3}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{3}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{6}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\epsilon}n_{\delta}n_{\epsilon}+\frac{1}{6}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{6}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\alpha}n_{\delta}n_{\epsilon}+\frac{1}{6}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\beta}n_{\delta}n_{\epsilon}-\frac{1}{3}\Gamma_{\beta}^{\delta\epsilon}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{1}{6}\Gamma_{\beta}^{\delta\epsilon}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{1}{6}\Gamma_{\alpha}^{\delta\epsilon}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{6}\Gamma_{\alpha}^{\delta\epsilon}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{6}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{6}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}$	$\Delta_{2^-}^{\#2\alpha\beta\chi}$
$\Gamma_{3^-}^{\#1\alpha\beta\chi}$	Symmetry[3, $\Gamma_{3^-}^{\#1\bullet1\bullet2\bullet3}$, { $\bullet1\rightarrow -a$, $\bullet2\rightarrow -b$, $\bullet3\rightarrow -c$ }, StrongGenSet[{1, 2, 3}, GenSet[(1,2), (2,3)]]]	$\frac{1}{6}\Gamma_{\alpha\beta\chi}+\frac{1}{6}\Gamma_{\alpha\chi\beta}-\frac{1}{15}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\delta}+\frac{1}{6}\Gamma_{\beta\alpha\chi}+\frac{1}{6}\Gamma_{\beta\chi\alpha}-\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\delta}+\frac{1}{6}\Gamma_{\chi\alpha\beta}+\frac{1}{6}\Gamma_{\chi\beta\alpha}-\frac{1}{15}\eta_{\alpha\beta}\Gamma_{\chi}^{\delta\delta}-\frac{1}{15}\eta_{\beta\chi}\Gamma_{\delta\alpha}^{\delta\delta}-\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\delta\beta}^{\delta\delta}-\frac{1}{15}\eta_{\alpha\beta}\Gamma_{\delta\chi}^{\delta\delta}-\frac{1}{15}\eta_{\beta\chi}\Gamma_{\delta\alpha}^{\delta\delta}-\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\delta\beta}^{\delta\delta}-\frac{1}{15}\Gamma_{\beta}^{\delta\delta}n_{\alpha}n_{\chi}+\frac{1}{15}\Gamma_{\alpha\beta}^{\delta\delta}n_{\alpha}n_{\chi}+\frac{1}{15}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\chi}-\frac{1}{15}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\chi}+\frac{1}{15}\Gamma_{\delta\alpha}^{\delta\delta}n_{\beta}n_{\chi}-\frac{1}{15}\Gamma_{\beta}^{\delta\delta}n_{\alpha}n_{\delta}-\frac{1}{15}\Gamma_{\delta\beta}^{\delta\delta}n_{\alpha}n_{\delta}+\frac{1}{15}\Gamma_{\chi\beta}^{\delta\delta}n_{\alpha}n_{\delta}-\frac{1}{15}\Gamma_{\chi}^{\delta\delta}n_{\alpha}n_{\delta}-\frac{1}{15}\Gamma_{\delta\chi}^{\delta\delta}n_{\alpha}n_{\delta}+\frac{1}{15}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\epsilon}n_{\alpha}n_{\delta}-\frac{1}{15}\Gamma_{\alpha\chi}^{\delta\delta}n_{\beta}n_{\delta}-\frac{1}{15}\Gamma_{\alpha}^{\delta\delta}n_{\beta}n_{\delta}+\frac{1}{15}\Gamma^{\delta\delta}_{\chi\alpha}n_{\beta}n_{\delta}-\frac{1}{15}\eta_{\alpha\chi}\Gamma^{\delta\epsilon}_{\epsilon}n_{\beta}n_{\delta}-\frac{1}{15}\Gamma_{\alpha\beta}^{\delta\delta}n_{\chi}n_{\delta}-\frac{1}{15}\Gamma_{\alpha}^{\delta\delta}n_{\chi}n_{\delta}+\frac{1}{15}\Gamma_{\beta\alpha}^{\delta\delta}n_{\chi}n_{\delta}+\frac{1}{15}\Gamma_{\beta}^{\delta\delta}n_{\chi}n_{\delta}-\frac{1}{15}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\alpha}n_{\epsilon}+\frac{1}{15}\eta_{\beta\chi}\Gamma^{\delta\epsilon}_{\delta}n_{\alpha}n_{\epsilon}+\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\delta}^{\delta\epsilon}n_{\beta}n_{\epsilon}+\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\delta}^{\delta\epsilon}n_{\beta}n_{\epsilon}+\frac{1}{15}\eta_{\alpha\beta}\Gamma_{\chi}^{\delta\epsilon}n_{\delta}n_{\epsilon}+\frac{1}{15}\eta_{\alpha\beta}\Gamma_{\chi}^{\delta\epsilon}n_{\delta}n_{\epsilon}+\frac{1}{15}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{15}\eta_{\beta\chi}\Gamma_{\alpha}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\epsilon}n_{\delta}n_{\epsilon}+\frac{1}{15}\eta_{\alpha\chi}\Gamma_{\beta}^{\delta\epsilon}n_{\delta}n_{\epsilon}-\frac{1}{15}\Gamma_{\beta}^{\delta\epsilon}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{1}{15}\Gamma_{\beta}^{\delta\epsilon}n_{\alpha}n_{\chi}n_{\delta}n_{\epsilon}+\frac{1}{15}\Gamma_{\alpha}^{\delta\epsilon}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{15}\Gamma_{\alpha}^{\delta\epsilon}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{15}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}-\frac{1}{15}\Gamma^{\delta\epsilon}_{\alpha}n_{\beta}n_{\chi}n_{\delta}n_{\epsilon}$	$\Delta_{3^-}^{\#1\alpha\beta\chi}$