

Fundamental field	Symmetries	Decomposition into SO(3) irrep(s)	Source
$\omega_{\alpha\beta\chi}$	Symmetry[3, $\omega^{\bullet 1\bullet 2\bullet 3}$, {●1 → -a, ●2 → -b, ●3 → -c}, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$-\frac{1}{2} \eta_{\beta\chi} \omega^{\#1}_{1^{-}}{}_{\alpha} + \frac{1}{2} \eta_{\alpha\chi} \omega^{\#1}_{1^{-}}{}_{\beta} + \frac{4}{3} \omega^{\#1}_{2^{-}}{}_{\alpha\beta\chi} + \frac{1}{3} \eta_{\beta\chi} \omega^{\#1}_{0^{+}}{}_{\alpha} n_{\alpha} + \omega^{\#1}_{1^{+}}{}_{\beta\chi} n_{\alpha} + \omega^{\#1}_{2^{+}}{}_{\beta\chi} n_{\alpha} - \frac{1}{3} \eta_{\alpha\chi} \omega^{\#1}_{0^{+}}{}_{\beta} n_{\beta} -$ $\omega^{\#1}_{1^{+}}{}_{\alpha\chi} n_{\beta} - \omega^{\#1}_{2^{+}}{}_{\alpha\chi} n_{\beta} + \omega^{\#2}_{1^{+}}{}_{\alpha\beta} n_{\chi} - \frac{1}{2} \omega^{\#1}_{1^{-}}{}_{\beta} n_{\alpha} n_{\chi} - \omega^{\#2}_{1^{-}}{}_{\beta} n_{\alpha} n_{\chi} + \frac{1}{2} \omega^{\#1}_{1^{-}}{}_{\alpha} n_{\beta} n_{\chi} + \omega^{\#2}_{1^{-}}{}_{\alpha} n_{\beta} n_{\chi} - \frac{1}{6} \epsilon \eta_{\alpha\beta\chi\delta} \omega^{\#1}_{0^{-}}{}_{\delta} n^{\delta}$	$\sigma_{\alpha\beta\chi}$
SO(3) irrep	Symmetries	Expansion in terms of the fundamental field	Source SO(3) irrep
$\omega^{\#1}_{0^{+}}$	Symmetry[0, $\omega^{\#1}_{0^{+}}$, {}, StrongGenSet[{}], GenSet[]]	$\omega_{\alpha}{}^{\beta}{}_{\beta} n^{\alpha}$	$\sigma^{\#1}_{0^{+}}$
$\omega^{\#1}_{0^{-}}$	Symmetry[0, $\omega^{\#1}_{0^{-}}$, {}, StrongGenSet[{}], GenSet[]]	$-\epsilon \eta_{\alpha\beta\chi\delta} \omega^{\beta\chi\delta} n^{\alpha}$	$\sigma^{\#1}_{0^{-}}$
$\omega^{\#1}_{1^{+}}{}_{\alpha\beta}$	Symmetry[2, $\omega^{\#1\bullet 1\bullet 2}_{1^{+}}$, {●1 → -a, ●2 → -b}, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$-\frac{1}{2} \omega_{\alpha\chi\beta} n^{\chi} + \frac{1}{2} \omega_{\beta\chi\alpha} n^{\chi} - \frac{1}{2} \omega_{\beta\chi\delta} n_{\alpha} n^{\chi} n^{\delta} + \frac{1}{2} \omega_{\alpha\chi\delta} n_{\beta} n^{\chi} n^{\delta}$	$\sigma^{\#1}_{1^{+}}{}_{\alpha\beta}$
$\omega^{\#2}_{1^{+}}{}_{\alpha\beta}$	Symmetry[2, $\omega^{\#2\bullet 1\bullet 2}_{1^{+}}$, {●1 → -a, ●2 → -b}, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$\omega_{\alpha\beta\chi} n^{\chi} + \omega_{\beta\chi\delta} n_{\alpha} n^{\chi} n^{\delta} - \omega_{\alpha\chi\delta} n_{\beta} n^{\chi} n^{\delta}$	$\sigma^{\#2}_{1^{+}}{}_{\alpha\beta}$
$\omega^{\#1}_{1^{-}}{}_{\alpha}$	Symmetry[1, $\omega^{\#1\bullet 1}_{1^{-}}$, {●1 → -a}, StrongGenSet[{}], GenSet[]]	$-\omega_{\alpha}{}^{\beta}{}_{\beta} + \omega_{\beta}{}^{\chi}{}_{\chi} n_{\alpha} n^{\beta} + \omega_{\alpha\beta\chi} n^{\beta} n^{\chi}$	$\sigma^{\#1}_{1^{-}}{}_{\alpha}$
$\omega^{\#2}_{1^{-}}{}_{\alpha}$	Symmetry[1, $\omega^{\#2\bullet 1}_{1^{-}}$, {●1 → -a}, StrongGenSet[{}], GenSet[]]	$\omega_{\alpha\beta\chi} n^{\beta} n^{\chi}$	$\sigma^{\#2}_{1^{-}}{}_{\alpha}$
$\omega^{\#1}_{2^{+}}{}_{\alpha\beta}$	Symmetry[2, $\omega^{\#1\bullet 1\bullet 2}_{2^{+}}$, {●1 → -a, ●2 → -b}, StrongGenSet[{1, 2}, GenSet[(1,2)]]]	$-\frac{1}{2} \omega_{\alpha\chi\beta} n^{\chi} - \frac{1}{2} \omega_{\beta\chi\alpha} n^{\chi} - \frac{1}{3} \eta_{\alpha\beta} \omega_{\chi}{}^{\delta}{}_{\delta} n^{\chi} + \frac{1}{3} \omega_{\chi}{}^{\delta}{}_{\delta} n_{\alpha} n_{\beta} n^{\chi} + \frac{1}{2} \omega_{\beta\chi\delta} n_{\alpha} n^{\chi} n^{\delta} + \frac{1}{2} \omega_{\alpha\chi\delta} n_{\beta} n^{\chi} n^{\delta}$	$\sigma^{\#1}_{2^{+}}{}_{\alpha\beta}$
$\omega^{\#1}_{2^{-}}{}_{\alpha\beta\chi}$	Symmetry[3, $\omega^{\#1\bullet 1\bullet 2\bullet 3}_{2^{-}}$, {●1 → -a, ●2 → -b, ●3 → -c}, StrongGenSet[{1, 2}, GenSet[-(1,2)]]]	$\frac{1}{2} \omega_{\alpha\beta\chi} + \frac{1}{4} \omega_{\alpha\chi\beta} - \frac{3}{8} \eta_{\beta\chi} \omega_{\alpha}{}^{\delta}{}_{\delta} - \frac{1}{4} \omega_{\beta\chi\alpha} + \frac{3}{8} \eta_{\alpha\chi} \omega_{\beta}{}^{\delta}{}_{\delta} - \frac{3}{8} \omega_{\beta}{}^{\delta}{}_{\delta} n_{\alpha} n_{\chi} + \frac{3}{8} \omega_{\alpha}{}^{\delta}{}_{\delta} n_{\beta} n_{\chi} + \frac{1}{4} \omega_{\beta\chi\delta} n_{\alpha} n^{\delta} + \frac{1}{2} \omega_{\beta\delta\chi} n_{\alpha} n^{\delta} +$ $\frac{1}{4} \omega_{\chi\delta\beta} n_{\alpha} n^{\delta} + \frac{3}{8} \eta_{\beta\chi} \omega_{\delta}{}^{\epsilon}{}_{\epsilon} n_{\alpha} n^{\delta} - \frac{1}{4} \omega_{\alpha\chi\delta} n_{\beta} n^{\delta} - \frac{1}{2} \omega_{\alpha\delta\chi} n_{\beta} n^{\delta} - \frac{1}{4} \omega_{\chi\delta\alpha} n_{\beta} n^{\delta} - \frac{3}{8} \eta_{\alpha\chi} \omega_{\delta}{}^{\epsilon}{}_{\epsilon} n_{\beta} n^{\delta} - \frac{1}{2} \omega_{\alpha\beta\delta} n_{\chi} n^{\delta} -$ $\frac{1}{4} \omega_{\alpha\delta\beta} n_{\chi} n^{\delta} + \frac{1}{4} \omega_{\beta\delta\alpha} n_{\chi} n^{\delta} + \frac{3}{8} \eta_{\beta\chi} \omega_{\alpha\delta\epsilon} n^{\delta} n^{\epsilon} - \frac{3}{8} \eta_{\alpha\chi} \omega_{\beta\delta\epsilon} n^{\delta} n^{\epsilon} - \frac{3}{8} \omega_{\beta\delta\epsilon} n_{\alpha} n_{\chi} n^{\delta} n^{\epsilon} + \frac{3}{8} \omega_{\alpha\delta\epsilon} n_{\beta} n_{\chi} n^{\delta} n^{\epsilon}$	$\sigma^{\#1}_{2^{-}}{}_{\alpha\beta\chi}$