

Basic conventions				
Minkowski metric tensor	Totally antisymmetric tensor	Four-momentum	Four-momentum norm	Massive rest-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 field	Symmetries	Decomposition in SO(3) irreps	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)]]]	$-\frac{1}{2} \ \eta_{\beta\chi} \ \omega_{1^-}^{\#1}{}_{\alpha} + \frac{1}{2} \ \eta_{\alpha\chi} \ \omega_{1^-}^{\#1}{}_{\beta} + \frac{4}{3} \ \omega_{2^-}^{\#1}{}_{\alpha\beta\chi} + \frac{1}{3} \ \eta_{\beta\chi} \ \omega_{0^+}^{\#1}{}_{n_{\alpha}} + \omega_{1^+}^{\#1}{}_{\beta\chi} \ n_{\alpha} + \omega_{2^+}^{\#1}{}_{\beta\chi} \ n_{\alpha} - \frac{1}{3} \ \eta_{\alpha\chi} \ \omega_{0^+}^{\#1}{}_{n_{\beta}} -$ $\omega_{1^+}^{\#1}{}_{\alpha\chi} \ n_{\beta} - \omega_{2^+}^{\#1}{}_{\alpha\chi} \ n_{\beta} + \omega_{1^+}^{\#2}{}_{\alpha\beta} \ n_{\chi} - \frac{1}{2} \ \omega_{1^-}^{\#1}{}_{\beta} \ n_{\alpha} \ n_{\chi} - \omega_{1^-}^{\#2}{}_{\beta} \ n_{\alpha} \ n_{\chi} + \frac{1}{2} \ \omega_{1^-}^{\#1}{}_{\alpha} \ n_{\beta} \ n_{\chi} + \omega_{1^-}^{\#2}{}_{\alpha} \ n_{\beta} \ n_{\chi} - \frac{1}{6} \ \epsilon\eta_{\alpha\beta\chi\delta} \ \omega_{0^-}^{\#1}{}_{n^{\delta}}$	$\sigma_{\alpha\beta\chi}$

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