

DIS 2015 - XXIII. International Workshop on Deep-Inelastic Scattering and
Related Subjects

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Singlet and non-singlet axial-vector form factors for the octet baryons.

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The axial-vector form factors of the low lying octet baryons (N , Σ , Ξ and Λ) have been studied for the implications of chiral symmetry breaking and SU(3) symmetry breaking for the singlet (g_A^0) and non-singlet (g_A^3 and g_A^8) axial-vector coupling constants. In addition to studying the total strange singlet and non-singlet contents ($G_s^0(Q^2)$, $G_s^3(Q^2)$ and $G_s^8(Q^2)$) of the nucleon determining the strange quark contribution to the nucleon spin (Δs), we have also used the conventional dipole form of parametrization to analyse the Q^2 dependence of the axial-vector form factors $G_A^0(Q^2)$, $G_A^3(Q^2)$ and $G_A^8(Q^2)$.

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