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Nucleon Spin Studies in the Valence Quark Region

ZEIN-EDDINE MEZIANI, Temple University

With a minimal contamination from the sea quarks and gluons the valence quark region provides a clean region to study the spin structure of the nucleon. Precision deep inelastic scattering measurements of g_1 and g_2 spin-dependent structure functions and their higher moments (integrals over x) offer an opportunity for testing our grasp of this structure. The valence quark distributions offer a good testing ground for constituent quark models of the nucleon. The higher moments of the quark distributions dominated by their valence contribution provide some of the cleanest tests of QCD. However, these tests require precision measurement in the large x region were cross sections fall rapidly. Last but not least, these distributions are a crucial input for calculating cross sections for hard processes in high-energy hadron-hadron colliders such as the LHC or the Fermilab Tevatron, in searches for the Higgs boson or for physics beyond the Standard Model. I shall discuss some of the recent precision results of the nucleon spin-dependent structure functions obtained in this region and their impact on our overall understanding of the nucleon spin structure. I'll finish with remarks on prospects of extending these studies in the future using the 12 GeV upgrade of CEBAF at Jefferson Lab.