

Plenary

Polarized Structure Functions in the Resonance and Valence Quark Regions and the Generalized GDH Sum.

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In the last ten years the spin structure of the nucleon spawned a very productive experimental and theoretical activity with exciting results and new challenges. The investigation of the nucleon spin structure has included a variety of aspects, such as testing QCD the theory of strong interactions in its perturbative regime via spin sum rules (like the Bjorken sum rule) and understanding how the spin of the nucleon is built from the intrinsic degrees of freedom of the theory, namely quarks, gluons and their interactions. Results from a new generation of experiments performed at Jefferson Lab to probe the theory in its perturbative as well as its non-perturbative regime, thus at large and low momentum transfers will be presented. Among others we shall discuss the nucleon extended Gerasimov-Drell-Hearn sum rule and the neutron spin asymmetry in the valence quark region.

¹For the JLab Hall A Polarized ³He Collaboration