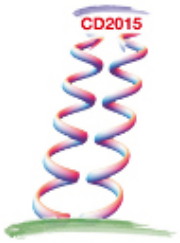

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An overview of recent nucleon spin structure measurements at Jefferson Lab

Thursday, 2 July 2015 09:25 (40 minutes)

Our understanding of nucleon spin structure is still far from complete. Experiments conducted at Jefferson Lab have made significant contributions to improve our knowledge of the longitudinal spin structure by measuring polarized structure functions, g1 and g2, down to Q^2 = 0.02 GeV^2. The low Q^2 data is especially useful in testing the Chiral Perturbation theory (ChiPT) calculations. The spin-dependent sum rules and the spin polarizabilities, constructed from the moments of g1 and g2, provide an important tool to study the longitudinal spin structure. We will present an overview of the experimental program to measure these structure functions at Jefferson Lab, and present some recent results on the neutron polarizabilities, proton g1 at low Q^2, and proton and neutron d2 measurements. In addition to this, we will discuss the transverse spin structure of the nucleon which can be accessed using chiral-odd transversity distribution (h1), and show our results from measurements done on polarized 3He target in Hall A.

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