

The Structure of the Nucleon

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The nucleon is a complex composite object. Its structure, the dynamics of its constituents and its mass presently cannot be calculated from Quantum Chromo Dynamics without simplifying model assumptions. Momentum- and spin-dependent distributions of quarks and gluons have been determined with increasing precision through 50 years of deep inelastic lepton-proton scattering experiments and the QCD analysis of 30 years of high energy proton-proton collider data. Despite this significant effort, there remain important shortcomings in the knowledge of proton structure. We will review present experimental knowledge and discuss the impact future high precision measurements at Jefferson Laboratory and EIC will have.

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