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Studies of the Nucleon Structure at Jefferson Lab

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The JLab 6 GeV electron beam has been used to study the nucleons internal structure in the transition from the regime of strongly interacting quarks and gluons to the deep inelastic regime of quasi-free interactions. Elastic and inelastic electron scattering, including the measurement of polarization observables, has led to deeper insight into the complex spatial and spin structure of the nucleon. In this talk, I will discuss results on the electromagnetic nucleon elastic form factors and on nucleon resonance transition form factors of several excited states of the proton. I will also present recent measurements of the spin responses of protons and neutrons in inclusive and exclusive electro production processes. Finally, I will discuss the prospects of probing generalized parton distributions (GPDs) in measurement of processes such as deeply virtual Compton scattering, both with the current 6 GeV machine, as well as at the higher energies available after the JLab 12 GeV upgrade.