

Abstract Submitted
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Measurements of the Electric Form Factor of the Neutron at High Momentum Transfer SEAMUS RIORDAN, University of Virginia, E02-013 COLLABORATION — The electromagnetic form factors of the nucleon provide experimental access to the underlying charge and magnetic moment distributions of quarks. These form factors provide excellent testing grounds for QCD and QCD-inspired models and are of fundamental importance in our understanding of non-perturbative QCD. Of the four nucleon form factors, the electric form factor of the neutron, G_E^n , has been measured in the smallest range of momentum transfer. We have measured the electric form factor of the neutron at four Q^2 points between 1.2 and 3.5 GeV² in Hall A at Jefferson Lab. This more than doubles the momentum transfer region for which this quantity has previously been measured, providing new information on the structure of the neutron. Final results for G_E^n at three Q^2 points, 1.7, 2.5 and 3.5 GeV², will be presented and compared with QCD-based models and phenomenological approaches.

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