

Abstract Submitted
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Beyond the Born Approximation: The Two-Photon Exchange Experiment in CLAS¹ PUNEET KHETARPAL, Florida International University, CLAS COLLABORATION — Knowledge of the electromagnetic form factors of the nucleon is crucial both for increasing our understanding of the proton and for interpreting proton knockout measurements from nuclei. However, there is a large discrepancy between proton electric form factor ($G_E(Q^2)$) measurements using the Rosenbluth separation method and ones using polarization transfer. This discrepancy increases to a factor of three at $Q^2 = 6 \text{ GeV}^2$. One of the most plausible proposed explanations is the contribution from two-photon exchange effects to ep elastic scattering. The two-photon exchange contribution is directly proportional to the deviation from unity of the ratio of the e^+p to e^-p elastic scattering cross sections. This ratio was measured at the Thomas Jefferson National Accelerator Facility using the CLAS detector in Hall-B in 2010-2011. The current status of the experiment is presented.

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