

Abstract Submitted
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The CLAS Two Photon Exchange Experiment: Analysis Methods¹ DIPAK RIMAL, BRIAN RAUE, PUNEET KHETARPAL, Florida International University, CLAS COLLABORATION — The two photon exchange contribution to the elastic electron proton scattering has been suggested as the most likely explanation for the discrepancy observed between Rosenbluth and the polarization transfer methods in the measurement of proton electric-to-magnetic form factor ratio of the proton (G_E^p/G_M^p). The Two Photon Exchange (TPE) experiment recently completed data taking in Jefferson Lab's Hall-B and will directly measure, with high precision, the TPE contribution to elastic scattering by comparing the ratio of cross sections for electron-proton to positron-proton elastic scattering. The data were collected using a primary electron beam of 5.6 GeV to produce a photon beam, which in turn was used to produce a mixed e^+/e^- beam that was incident upon an LH₂ target. The CEBAF Large Acceptance Spectrometer (CLAS) was used to detect both the scattered leptons and protons. The resulting data span Q^2 up to 2.5 GeV² and nearly the entire epsilon range. The analysis techniques will be discussed along with some preliminary results.

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