

Abstract Submitted
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Measurement of two-photon exchange effect with CLAS MARYAM MOTEABBED, BRIAN RAUE, Florida International University, CLAS COLLABORATION — The two-photon exchange phenomenon is believed to be responsible for the discrepancy observed between the ratio of proton electric and magnetic form factors, measured by the Rosenbluth and polarization transfer methods. This disagreement is about a factor of three at Q^2 of 5.6 GeV². The two-photon exchange (TPE) radiative correction can be directly measured by taking the ratio of the electron-proton and positron-proton elastic scattering cross sections, as it changes sign with respect to the charge of the incident particle. A test run of a modified beamline has been conducted with the CLAS detector at Thomas Jefferson National Accelerator Facility. This test run demonstrated the feasibility of producing a mixed electron/positron beam of good quality. In addition, $e^- + p$ and $e^+ + p$ elastic scattering data were obtained for Q^2 up to nearly 1.0 GeV² and preliminary results will be presented.

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