

Abstract Submitted  
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**Two Photon Exchange (TPE) Experiment at CLAS** MEGH NIROULA, Old Dominion University, CLAS COLLABORATION TEAM — The ratio of the Electric ( $G_E$ ) and magnetic ( $G_M$ ) form factors of the proton measured by Rosenbluth Separation and Polarization Transfer methods differ by a factor of three at  $Q^2$  of  $5.6 \text{ GeV}^2$ . The real part of the Two Photon Exchange (TPE) amplitude in lepton-proton elastic scattering is expected to explain this discrepancy. The ratio of elastic positron-proton to electron-proton cross sections is the only way to measure this real part. We will measure this cross section ratio using a mixed electron-positron beam in CLAS at Jefferson Lab. In this talk I will present how the electron-positron beam is produced, the backgrounds that limit our luminosity and the simulations used to reduce those backgrounds.

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