

Abstract Submitted
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Two-photon exchange contribution to elastic electron-proton scattering MIKHAIL YUROV, Univ of Virginia, E05-017 Collaboration — Two experimental techniques, Rosenbluth separation and recoil polarization transfer, used to extract proton's electromagnetic form factors ratio $\frac{G_E}{G_M}$ yield markedly different results. Modern theoretical calculations suggest that two-photon exchange might be responsible for the observed discrepancy and that it is epsilon dependent. Jefferson Lab Experiment E05-017 was designed to measure the two-photon exchange contribution over a wide range of ε and Q^2 . In contrast with the conventional Rosenbluth method, E05-017 detected the elastically scattered proton rather than the electron. This approach returns a much more precise extraction of the form factor ratios. After a brief description of the experimental goals and techniques, the current status of the analysis will be presented.

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