

Abstract Submitted
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Positron-proton to electron-proton elastic cross section ratios from CLAS DASUNI ADIKARAM, Old Dominion University, DIPAK RIMAL, Florida International University, LARRY WEINSTEIN, Old Dominion University, BRIAN RAUE, Florida International University, CLAS COLLABORATION — There is a significant discrepancy between the ratio of the electromagnetic form factors of the proton measured by the Rosenbluth and the polarization transfer technique. The most likely explanation of this discrepancy is the inclusion of two-photon exchange (TPE) amplitude contributions to the elastic electron-proton cross section. The CLAS TPE experiment measured the TPE contribution in the wide range of Q^2 and ε range using a comparison of positron-proton to electron-proton elastic cross sections ($R = \sigma(e^+p)/\sigma(e^-p)$). Preliminary results will be presented, along with the estimations of systematic uncertainties. A detailed comparison of new results with previous R measurements and theoretical calculations will be presented. Implications of the CLAS TPE measurements on the elastic electron-proton cross section will be also discussed.

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