Abstract Submitted
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Measurements of the Generalized Polarizabilities of the proton at Jefferson Lab[1] RUONAN LI, HAMZA ATAC, NIKOS SPARVERIS, Temple University, MICHAEL PAOLONE, New Mexico State University, ALEXANDRE CAMSONNE, MARK JONES, Jefferson Lab — The Generalized Polarizabilities (GPs) are fundamental properties of the nucleon. They characterize the nucleon's response to an applied electromagnetic field, offering access to the polarization densities inside the nucleon, and as such they represent an essential part for a complete understanding of the nucleon structure and dynamics. The GPs can be explored through the measurement of the Virtual Compton Scattering reaction. The VCS experiment (E12-15-001) at JLab was recently carried out in Hall C using the new Super High Momentum Spectrometer (SHMS) for electron detection and the High Momentum Spectrometer (HMS) for proton detection, with the virtual photon identified by missing mass. The experiment focuses on extracting the electric and the magnetic GPs of the proton in the intermediate four-momentum transfer squared region, namely from Q^2 =0.3 (GeV^2) to Q^2 =0.7 (GeV^2). The status of the experiment analysis, preliminary results and future prospects will be discussed in this talk.

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Ruonan Li
Temple University

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