Abstract Submitted
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Neutral Pion Electroproduction in the Deeply Virtual Regime at 12 GeV Jefferson Lab[1] SALINA ALI, TANJA HORN, The Catholic University of America, CARLOS MUNOZ-CAMACHO, IPN-Orsay, JULIE ROCHE, Ohio University, CHARLES HYDE, Old Dominion University, JLAB HALL A DVCS-3 COLLABORATION COLLABORATION — Deep exclusive processes can allow access to Generalized Parton Distributions (GPDs), a concept that lies at the root of 3D imaging of the proton's quark-gluon substructure, as GPDs contain information about the transverse spatial distribution of quarks and their longitudinal momentum inside hadrons. The key to extracting GPDs from experiments are the Quantum Chromodynamics (QCD) factorization theorems. Deeply Virtual Compton Scattering (DVCS) is the cleanest way to study GPDs. While DVCS data have given hints of the factorization regime being attained, such hints have not been observed for Deeply Virtual Meson Production (DVMP) data. Exclusive π^0 electroproduction has been measured by experiment E12-06-114 in Hall A of JLab in order to test factorization in DVMP processes. Cross sections have been measured at three fixed Bjorken-x (x_B): 0.36, 0.48 and 0.6 in the Q^2 range 3 to 9 GeV^2. High statistical measurements of polarized and unpolarized cross sections of H(e,e'γ)p could allow mapping and extraction of GPD information from the nucleon. In this talk, I will show the experimental setup, calibration and preliminary results of the neutral pion electroproduction cross sections for x_B >0.3 from this experiment.

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