

Abstract Submitted
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Neutral Pion Electroproduction Cross Sections in Deeply Virtual Compton Scattering (DVCS) kinematics at 12 GeV Jefferson Lab¹
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— The third Deeply Virtual Compton Scattering experiment (DVCS-3) at the Thomas Jefferson National Accelerator Facility's (TJNAF) Hall A measured both helicity-dependent and helicity-independent cross sections of the $H(e,e',\gamma)p$ Deeply Virtual Compton Scattering (DVCS) in a wide Q^2 range (from 3 to 9 GeV^2), made possible by the recent 12 GeV upgrade, at different values of Bjorken- x (x_B from 0.36 to 0.60). A measurement over this range in Q^2 provides a strong test of the Generalized Parton Distribution (GPD) formalism in explaining the proton structure. DVCS is the cleanest way to study GPDs. The key to extracting GPDs from experiments are the Quantum Chromodynamics (QCD) factorization theorems. While DVCS data have given hints of the factorization regime being attained, such hints have yet to be confirmed for Deeply Virtual Meson Production (DVMP) data. Exclusive π^0 electroproduction has been measured by the DVCS-3 experiment in order to test factorization in DVMP processes. In this talk, I will discuss the experimental setup and preliminary results of the neutral pion electroproduction cross sections for $x_B > 0.3$ from this experiment.

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