

Abstract Submitted
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Deeply Virtual Exclusive Reactions with CLAS VALERY KUBAROVSKY, Jefferson Lab, CLAS COLLABORATION — Deeply virtual exclusive reactions offer a unique opportunity to study the structure of the nucleon at the parton level as one varies both the size of the probe, i.e. the photon virtuality Q^2 , and the momentum transfer to the nucleon t . Such processes can reveal much more information about the structure of the nucleon than either inclusive electroproduction (Q^2 only) or elastic form factors ($t = -Q^2$). A dedicated experiment to study Deeply Virtual Compton Scattering (DVCS) and Deeply Virtual Meson Production (DVMP) has been carried out in Hall B at Jefferson Lab. DVCS helicity-dependent and helicity-independent cross sections, as well as beam spin asymmetry, and cross sections and asymmetries for the π^0 and η exclusive electroproduction in a wide kinematic range of Q^2 , x_B and t have been measured with CLAS. The preliminary data will be presented for the kinematic range in $Q^2=1-4.5$ GeV², $x_B=0.1-0.5$ and t up to 2 GeV². We view the work presented in this report as leading into the program of the Jefferson Lab 12 GeV upgrade. The increased energy and luminosity will allow us to make the analysis at much higher Q^2 and x_B and perform Rosenbluth L/T separations of the cross sections.

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