

Abstract Submitted
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Deeply virtual Compton scattering on longitudinally polarized protons at CLAS ANGELA BISELLI, Fairfield Univ, CLAS COLLABORATION — The Generalized Parton Distributions (GPDs) have emerged as a universal tool to describe hadrons in terms of their elementary constituents, the quarks and the gluons. Deeply Virtual Compton Scattering (DVCS) ($ep \rightarrow e'p'\gamma$) is one of the simplest processes that can be described in terms of GPDs. The DVCS-Bethe-Heitler (BH) interference gives rise to spin asymmetries, which can be connected to combinations of Compton Form Factors (CFFs), which are integrals of GPDs. The longitudinal target single-spin asymmetry (SSA) is directly proportional to the imaginary part of the DVCS amplitude, and gives access to a combination of the CFFs $Im(\tilde{\mathcal{H}})$ and $Im(\mathcal{H})$, whereas the double-spin asymmetry (DSA) is proportional to a combination of the CFFs of $Re(\tilde{\mathcal{H}})$ and $Re(\mathcal{H})$. These asymmetries were measured in a dedicated experiment at Jefferson Lab using the CEBAF 6-GeV polarized-electron beam, a longitudinally polarized solid-state $^{14}\text{NH}_3$ target, and the CEBAF Large Acceptance Spectrometer, together with the Inner Calorimeter. DVCS/BH events were selected over the following kinematic ranges: $1 < Q^2 < 4.5 \text{ GeV}^2$, $0.1 < x_B < 0.58$, $0.08 < -t < 1.8 \text{ GeV}^2$ and, the target-SSA and DSA were

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