

Abstract Submitted
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Measuring Deeply Virtual Compton Scattering off the Neutron with CLAS12 at Jefferson Lab ADAM HOBART, CNRS - IN2P3, CLAS12 COLLABORATION — A key step towards a better understanding of nucleon structure in terms of Generalized Parton Distributions (GPDs) is the measurement of deeply virtual Compton scattering off the neutron (nDVCS; $ed \rightarrow e'n\gamma(p)$). The experimental measurement of the beam-spin asymmetry (BSA) for this process emphasizes mainly the access to the GPD E , which is so far the least constrained of the four leading-twist quark-helicity-conserving GPDs. The knowledge of E provides information on the quark total angular momentum - via the Ji's sum rule - helping completing our picture of nucleon structure. Moreover, the measurement of nDVCS, combined with complementary pDVCS measurements, allows the flavor separation of relevant quark GPDs, accessible as linear combinations of proton and neutron GPDs. This talk will report on an experiment carried at Jefferson Lab in 2019, utilizing the upgraded 10.6 GeV CEBAF polarized electron beam, the CLAS12 detector, and a liquid deuterium target. Details on the data analysis along with preliminary beam-spin asymmetries for nDVCS will be presented.

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