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Deeply Virtual Compton Scattering at Multi-Energy Polarized Electron Beam with CLAS12 JOSHUA ARTEM TAN, Kyungpook National University, Korea, LATIFA ELOUADRHIRI, Jefferson Lab, FRANCOIS-XAVIER GIROD, University of Connecticut, CLAS COLLABORATION — DVCS provides access to the 3D imaging of the nucleon structure encoded in the Generalized Parton Distributions, which correlate the 1D longitudinal momentum fraction of the nucleons constituent to its 2D transverse position. In the DVCS reaction, the virtual photon from the scattered electron interacts with a quark inside the nucleon, resulting in the nucleons emission of a high-energy real photon. DVCS naturally comes with Bethe-Heitler (BH) process, which has the same final-state particles but with the photon emitted instead by the scattered electron. By conducting DVCS experiments at different beam energies, separation of the DVCS amplitude from DVCS-BH interference amplitude can be performed and this allows for the extraction of the D(t) form factor, which may shed light on nucleons confinement mechanism. Data were collected with the CLAS12 detector at high luminosity and at different electron beam energies, focusing on the Beam-Spin Asymmetry, which is particularly sensitive to the D(t) term. CLAS12 provides the ideal setup for multi-energy DVCS experiments with efficient particle detection in broad kinematic ranges. First multi-energy DVCS results will be presented, and plans for the extraction of the D(t) form factors will be discussed.

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