Deeply virtual Compton scattering with CLAS12[1] ANGELA BISELLI, Fairfield University, 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) on nucleons or nuclei (N), $eN \rightarrow e'N'\gamma$, is one of the simplest processes that can be described in terms of GPDs. The amplitudes of DVCS and Bethe-Heitler, process where a photon is emitted by the incident or scattered electron, can be accessed via cross section measurements or exploiting their interference which give rise to spin asymmetries. Spin asymmetries, cross sections and cross-section differences can be connected to different combinations of GPDs. This talk focuses on data currently being taken at 11 GeV in Hall B with the CLAS12 detector, with polarized beam and a liquid deuterium target. Preliminary analysis of the data towards the extraction of coherent DVCS asymmetries on the deuteron will be presented. Completion of this work will contribute to our understanding of the 3D partonic structure of nuclei.

Angela Biselli
Fairfield University