

Double Deeply Virtual Compton Scattering Opportunities at Jefferson Laboratory using the SoLID spectrometer

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Jefferson Laboratory with the current 12 GeV upgrade and a major program focused on the Generalized Parton Distributions has the opportunity to explore the Doubly Virtual Compton Scattering (DDVCS) process which would allow to probe GPDs surface for skewness different from the generalized bjorken variable. Such an experiment requires high luminosity because of a cross section about 100 times smaller than regular Deeply Virtual Compton Scattering. The Solenoidal Large Intensity Device (SoLID) is a solenoidal detector equipped with Gas Electron Multiplier trackers, calorimetry and Cerenkov detectors design to run at high luminosity up to $10^{39} \text{cm}^{-2} \cdot \text{s}^{-1}$. We are proposing to supplement the baseline detector with muon detection to study the DDVCS in the dimuons channel. I will present two possible experiments using the SoLID apparatus. One which would run concurrently with currently approved J/Psi experiment and one with a dedicated setup optimized for high luminosity and for the DDVCS kinematic. I will discuss the different setups and present the physics reach of the two proposed experiments.