

Double Deeply Virtual Compton Scattering (DDVCS) at 22 GeV

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One of the main challenges in the extraction of Generalized Parton Distributions (GPDs) from the currently available experimental data is that experimental observables can access only two of three variables, x , ξ , and t , that define the GPDs. The variable ξ is integrated over in the DVCS and TCS amplitudes due to the loop in the “handbag” diagrams. The only information that can be accessed in spin asymmetries is GPDs at the $\xi = \pm\xi$ point. The Double Deeply Virtual Compton Scattering (DDVCS) process, where both the incoming and outgoing photons have large virtualities, allows for independently mapping the GPDs along all three variables (ξ , ξ , and t). In this talk, I will discuss the possibilities of DDVCS measurements at JLab and the importance of such measurements with 12 GeV and 22 GeV electron beams.

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Session Classification: Spatial Structure, Mechanical Properties, and Emergent Hadron Mass