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## Double Deeply Virtual Compton Scattering (DDVCS) at Electron-Ion Collider

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Generalized Parton Distributions (GPDs) have emerged during the 1990s as a powerful concept and tool to study nucleon structure. They provide nucleon tomography from the correlation between transverse position and longitudinal momentum of partons. The Double Deeply Virtual Compton Scattering (DDVCS) process corresponds to the scattering from the nucleon of a virtual photon that finally generates a lepton pair. The virtuality of this photon can be measured and varied, thus providing the necessary lever arm to measure independently the dependences of the GPDs on the initial and transferred momentum[1,2].

Since the cross section of the DDVCS process is very small, any experimental investigation requires high luminosity. The current technology of polarized targets does not allow to operate them in fixed target experiment at such a luminosity. The Electron-Ion Collider (EIC) provides another opportunity for measuring longitudinally and transversely polarized nucleon observables to access GPDs. This presentation will discuss model-predicted DDVCS experimental observables in the kinematical regime of EIC and will address the impact of potential measurements.

[1] M. Guidal and M. Vanderhaeghen, Phys. Rev. Lett. 90 (2003) 012001.

[2] A. V. Belitsky and D. Müller, Phys. Rev. Lett. 90 (2003) 022001.

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