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GPDs at an Electron Ion Collider

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Summary

The feasibility for a precise determination of the Generalized Parton Distribution (GPDs) functions at an Electron Ion Collider (EIC) has been explored. The high
luminosity of the machine, together with the large resolution and rapidity acceptance of a newly designed dedicated detector, will open a opportunity for very high precision measurements of GPDs. We report on the access of GPDs from deeply virtual Compton scattering (DVCS) and Vector Meson Production (VMP) measurements. We also point out that such measurements at a proposed EIC provide provide insight to both the transverse
distribution of sea quarks and gluons as well as the proton spin decomposition.

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