

Deeply Virtual Compton Scattering from Gauge/Gravity Duality

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Summary

We use gauge/gravity duality to study deeply virtual Compton scattering (DVCS) in the low x limit, where the process is dominated by the exchange of the pomeron. At strong coupling, the pomeron is described as the graviton Regge trajectory in AdS space, with a hard wall to mimic confinement effects. This model agrees with HERA data in a large kinematical range. The behavior of the DVCS cross section for very high energies, inside saturation, can be explained by a simple AdS black disk model. In a restricted kinematical window, this model agrees with HERA data as well.

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