

DIS2023: XXX International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 115

Type: **Parallel talk**

Single inclusive diffraction: from HERA to the future EIC

Wednesday 29 March 2023 11:50 (20 minutes)

In this talk, we present numerical results on diffractive dissociation of virtual photon in the scattering off hadron. The calculation employs the dipole picture of diffractive deep inelastic scattering and solutions to nonlinear Kovchegov-Levin equation, taking into account the running coupling correction and a simple treatment of impact parameter dependence. The (generalized) McLerran-Venugopalan amplitudes are chosen as the initial conditions for the nonlinear evolution, with relevant parameters being constrained by the inclusive DIS data from HERA. The results show a reasonable description to the diffractive HERA data on electron-proton collision, which demonstrates the possibility to extend the calculation to the scattering off nuclei. Some results for the latter case are then presented, which serve as predictions for the future Electron-Ion Collider.

Submitted on behalf of a Collaboration?

No

Participate in poster competition?

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Session Classification: WG2

Track Classification: WG2: Small-x, Diffraction and Vector Mesons