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The impact of gluon saturation in forward dijet/dihadron measurements at the EIC

Inclusive measurements of back-to-back dijets/dihadrons in deep inelastic scattering (DIS) present a promising channel to access signatures of gluon saturation inside nuclear matter at the future Electron-Ion Collider (EIC). While most phenomenological studies have been performed within the powerful TMD factorization framework, there are important kinematic (perturbative power) and genuine saturation corrections that must be resummed for more controlled phenomenological predictions. The Color Glass Condensate (CGC) is a suitable framework that resums both kinds of contributions.

In this talk, I will present our results for inclusive diparton production in proton and nuclear DIS at leading order in the CGC. Our numerical results are compared to the TMD framework for a wide range of kinematics accessible at the future EIC. We find that both kinematic and genuine saturation corrections are significant and could be accessed in dijet and dihadron measurements.

Primary authors: SALAZAR, Farid (Stony Brook University); SCHENKE, Bjoern (BNL); Dr MÄNTYSAARI, Heikki (University of Jyväskylä); MUELLER, Niklas (Brookhaven National Laboratory); BOUSSARIE, Renaud (Los Alamos National Lab)

Presenter: SALAZAR, Farid (Stony Brook University)

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