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Exclusive and inclusive dijet production in electron-proton and electron-nucleus collisions at small- x

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We present the computation of exclusive and inclusive dijet production in electron-proton and electron-nucleus collisions at small- x within the Color Glass Condensate effective field theory. We compute the cross-sections differentially in mean dijet momentum and momentum imbalance, as well as its corresponding elliptic anisotropy. For exclusive dijet production, we employ a dipole model with impact parameter and orientation dependence from a modified McLerran-Venugopalan model that incorporates the finite-size charge density of the target. For inclusive dijet production, we confirm and extend existing results in the correlation limit approximation by computing the differential cross-section and elliptic anisotropies from full multi-gluon correlations using the Gaussian approximation of high energy correlators, and Balitsky-Kovchegov evolution with running coupling. For both exclusive and inclusive production, we highlight kinematical regions for observing potential signals of saturation and measuring multi-gluon correlations in a future Electron-Ion Collider.

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

Presenter: SALAZAR, Farid (Stony Brook University)

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