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NLO Corrections to Di-Jet Production in DIS Using the Color Glass Condensate

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Di-Jet angular correlations serve as a sensitive probe of saturation physics in the Color Glass Condensate (CGC), an effective theory of QCD in which a heavy target nucleus can be modeled as a classical background field. The leading order cross section for di-jet production in Deep Inelastic Scattering (DIS) is well known, but experiments at the Electron Ion Collider will be sensitive to corrections. Here we present our preliminary results for the calculation of Next to Leading Order (NLO) corrections to di-jet production in DIS at small Bjorken x , where the target nucleus is treated as a CGC. These results have additional utility in providing initial conditions for heavy ion collisions. The Wilson line correlators are averaged according to the gaussian (MV) model, and we use the spinor helicity formalism for efficient calculation of the helicity structure.

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