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Calculation of sub-eikonal corrections for the dijet production in the background field method

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The search of the signatures of saturation is one of the main goals of the future Electron-Ion Collider (EIC). In this regime the background field of the target is characterized by the shock-wave structure defined by the eikonal interactions. However, we expect that this limit will be hard to achieve at EIC, due to the moderate values of the scattering energies. Instead, the leading eikonal picture of scattering will be spoiled by so-called sub-eikonal corrections that effectively describe the transition between the limits of large- and small-x. For this reason, understanding the sub-eikonal corrections is essential for the search of saturation at EIC. In the talk, I will describe application of the background field method to calculating of the sub-eikonal corrections for the dijet production process. I will describe advantages of the method comparing to other available calculation schemes, in particular, its efficiency in determination of the structure of QCD operators defining interaction between the dijet pair and the background field of the target, which leads to important physical conclusions.

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