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Nuclear Modification of Dijet at EIC

Tuesday, June 2, 2020 11:00 AM (20 minutes)

We study the nuclear modification for the dijet cross section in eA deeply inelastic scattering (DIS) process. This nuclear modification comes from multiple scattering of final state parton in a large nucleus, including medium induced radiation. This extra modification to dijet cross section depends on transverse momentum dependent (TMD) quark-gluon correlation function, which can be approximately factorized as large-x TMD quark distribution function and small-x TMD gluon distribution function. The small-x TMD gluon distribution is also related to TMD jet transport coefficient in cold nuclei. With input of the large-x TMD quark distribution, the nuclear modified dijet cross section can be used to probe the small-x TMD gluon distribution/ TMD jet transport coefficient inside the nuclei. The quantitative determination of transport coefficient in cold nuclei will shed light on transport coefficient of hot and dense quark gluon plasma (QGP). Predictions for dijet cross section at large-x region for EIC collider kinematics are given in this study.

Collaboration (if applicable)

OTHER (Please specify in comments field)

Track

Jets and High Momentum Hadrons

Contribution type

Contributed Talk

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