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The suppressions of dijet azimuthal correlations in the future EIC

Quark-antiquark pair (or dijet) production at the electron-ion collider (EIC) has been argued to be one of most important processes that allowing to access the Weizs\"acker-Williams (WW) gluon distributions at small x limit. Within the framework of Color Glass Condensate (CGC) effective field theory (EFT), we calculated the dijet cross sections and the azimuthal correlations by including the Sudakov resummations, numerical results shown that the back-to-back correlations are significantly suppressed when the Sudakov resummations are taken into account. In addition, by using the solutions of running-coupling Balitsky-Kovchegov (rcBK) equation, the unpolarized and linearly polarized WW gluon distributions both in coordinate and momentum space are given.

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