XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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Gauge-invariant TMD factorization for Drell-Yan hadronic tensor at small x

The Drell-Yan hadronic tensor for electromagnetic (EM) current in the Sudakov region $s\gg Q^2\gg q_\perp^2$ is obtained

with $\frac{1}{Q^2}$ accuracy.

In the leading order in N_c the higher-twist quark-quark-gluon TMDs reduce to

leading-twist TMDs due to QCD equation of motion. The resulting tensor for unpolarized hadrons is EM gauge-invariant and depends on two leading-twist TMDs: f_1 responsible for total DY cross section, and Boer-Mulders function h_1^{\perp} . The order-of-magnitude estimates of angular distributions for DY process seem to agree with LHC results at corresponding kinematics.

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