

# 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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