Light-Cone 2024: Hadron Physics in the EIC era



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Nucleon tomography in the threshold limit

Monday, 25 November 2024 16:00 (30 minutes)

We apply the joint threshold and transverse momentum dependent (TMD) factorization theorem to introduce new threshold-TMD distribution functions, including threshold-TMD parton distribution functions (PDFs) and fragmentation functions (FFs). We apply Soft-Collinear Effective Theory and renormalization group methods to perform QCD evolution for both threshold-TMD PDFs and FFs. We show the universality of threshold-TMD functions among three standard processes, i.e., the Drell-Yan production in pp collisions, semi-inclusive deep-inelastic scattering, and back-to-back two hadron production in e+e-collisions.

Primary author: SHAO, Dingyu (Fudan University)

Presenter: SHAO, Dingyu (Fudan University)

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