

SCET Workshop 2022



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TMD distributions at the next-to-leading power

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The TMD factorization at the next-to-leading power has an involved structure of singularities. I discuss the definition and properties of transverse momentum dependent (TMD) distributions of the twist-three including evolution, symmetry relations, parametrization, interpretation, and singularities. I demonstrate that the physical TMD distributions (those express cross-sections) require an extra subtraction term. As an example of application, I present the Drell-Yan hadron tensor at the next-to-leading power in the terms of physical distributions and explicitly demonstrate the cancellation of rapidity and end-point divergences. This discussion completes the construction of TMD factorization at the next-to-leading power.

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