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Tree level matching relations for next-to-leading power transverse momentum dependent distributions with mass corrections

Tuesday, 10 December 2024 12:20 (15 minutes)

Sub-leading twist contributions to scattering processes, such as semi-inclusive DIS (SIDIS), are gaining increased attention as they provide valuable insights that complement leading-twist contributions in probing the proton structure.
In this talk I will present the results for the matching relations of twist-3 transverse momentum dependent distributions (TMDs) onto collinear distributions of twist-3. After a brief introduction to twist 3 TMDs, their relevance in the SIDIS angular modulations and the computational technique that we used to obtain the matching relations with the complete series of mass corrections, I will discuss the results and their implication for the SIDIS cross section.

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