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Non-perturbative contributions to vector boson transverse spectra: PDF bias and flavor dependence in TMD distributions

Saturday, 9 July 2022 09:15 (15 minutes)

This talk presents results, based on the papers arXiv:2201.07114 [hep-ph], arXiv:2109.12051 [hep-ph], Phys. Lett. B 806 (2020) 135478 [arXiv:2002:12810 [hep-ph]], on the determination of the TMD parton distributions and rapidity evolution kernel from transverse momentum spectra. It is shown that the bias induced by PDF in TMD extractions is alleviated if PDF uncertainties are taken into account and the TMD profile is flavor-dependent. Both points improve the agreement between theory and experiment, substantially increase the uncertainty in extracted TMD distributions, and should be taken into account in future global analyses.

In-person participation

Yes

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