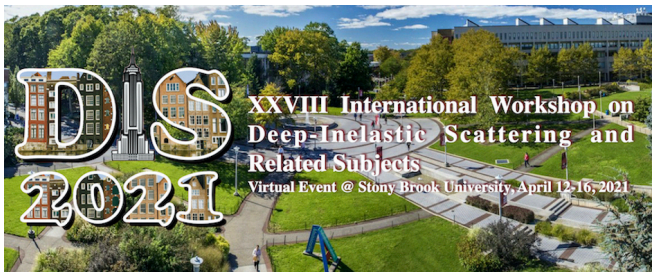

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Drell-Yan transverse spectra at the LHC: a comparison of parton branching and analytic resummation approaches

Thursday, 15 April 2021 13:26 (17 minutes)

A parton branching (PB) formulation for the QCD evolution of transverse momentum dependent (TMD) parton distribution functions has been recently developed. With the implementation of this in the evolution program updfevolv and the parton shower Monte Carlo event generator Cascade3, PB TMD predictions for observables in broad kinematic regimes can be made. In this talk I focus on recent PB TMD results for Drell-Yan transverse momentum spectra, and present a systematic comparison of them with results from CSS analytic resummation obtained via the program reSolve. I concentrate on the estimate of theoretical uncertainties in the two frameworks for the LHC kinematic region, the order of perturbative logarithmic accuracy and the role of non-perturbative TMD effects.

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