

Contribution ID: 81

Type: Parallel

The evolution of the parton distribution functions to percent accuracy

Monday 7 July 2025 08:45 (17 minutes)

I present analytic results for the scale evolution of the first ten moments of the Parton Distribution Functions (PDFs) through four loops in QCD.

I discuss the evolution of the PDFs to approximate N³LO accuracy, which is constructed by using input from the computed moments and from physical constraints. The N³LO contributions are of the order of 1% or less for x

 $gtrsim10^{-4},$ thus providing a highly accurate PDF evolution across an important part of the kinematic plane covered at the LHC.

Secondary track

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Track Classification: T05 - QCD and Hadronic Physics