

Joint 20th International Workshop on Hadron Structure and Spectroscopy and 5th workshop on Correlations in Partonic and Hadronic Interactions



Contribution ID: 46

Type: **not specified**

Phenomenological comparison of Lattice calculations of the Collins-Soper kernel

Friday 4 October 2024 11:20 (15 minutes)

Relevant information about hadron structure is contained in nonperturbative functions called Transverse Momentum Dependent Parton Distribution Functions (TMD PDFs) and the Collins-Soper kernel, a universal function which regulates their scale evolution.

Usually these functions are obtained by modeling and fitting to experimental data but in recent years lattice calculations have calculated the CS kernel from the theory. These calculations could be advantageous in studying the theory with a less relevant model dependence but they require to be tested too, as they contain internal approximations and assumptions which affect the results.

This talk describes a current study in which we aim to analyze the compatibility of recent lattice results with the experimental data.

More specifically the talk focuses on the steps adopted to extract the information from the lattice results and use it, working in the Collins Soper Serman (CSS) formalism, to fit and directly compare the calculations on low and high energy data.

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Session Classification: Friday Morning