



ID contributo: 3

Tipo: non specificato

Helicity-dependent Parton Distribution Functions at NNLO: determination from DIS and SIDIS data and impact of heavy quarks

mercoledì 29 maggio 2024 09:30 (30 minuti)

I discuss MAPPDFpol1.0, a new determination of the helicity-dependent parton distribution functions (PDFs) of the proton from a set of longitudinally polarised inclusive and semi-inclusive deep-inelastic scattering data. The determination includes, for the first time, next-to-next-to-leading order QCD corrections to both processes, and is carried out in a framework that combines a neural-network parametrisation of PDFs with a Monte Carlo representation of their uncertainties. I discuss the quality of the determination, in particular its dependence on higher-order corrections, on the choice of data set, and on theoretical constraints. I finally assess the impact of charm quark corrections in the computation of theoretical predictions, by extending the FONLL mass scheme to the case of helicity-dependent PDFs.

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