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MSHT20 PDFs review and recent developments

Monday 1 August 2022 16:30 (25 minutes)

The MSHT20 PDFs represented a significant step forward in terms of the accuracy and precision of the resulting PDFs, and followed substantial progress on the experimental, methodological and theoretical fronts. I will review the MSHT20 PDFs before detailing several of the subsequent studies we have undertaken within the MSHT collaboration, both completed and ongoing work. This will range from studies of the strong coupling and heavy quark mass sensitivity of the PDFs, to the production of MSHT20qed PDFs including QED effects and a photon PDF, through recent work on theoretical uncertainties and approximate N3LO PDFs, and finally the investigation of the impact of new data on the PDFs. I will also briefly outline the PDF4LHC21 combined PDFs, which include MSHT20 as an input along with the CT18 and NNPDF3.1 PDF sets.

Preferred track

Hadron Structure

Subfield

HEP theory

Attending in-person?

Yes

On behalf of collaboration?

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