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xFitter project

Wednesday, April 13, 2016 5:30 PM (15 minutes)

An accurate knowledge of the Parton Distribution Functions (PDF) plays a critical role for the precision tests of the Standard Model (SM) and impact substantially the theory predictions of Beyond SM high mass production.

We present the xFitter project (former HERAFitter) which provides a unique open-source software framework for the determination of the proton's PDFs and for the interpretation of the physics analyses in the context of Quantum Chromodynamics.
We highlight the new xFitter software release which includes many new features and additions, e.g. the possibility of the inclusion of photon PDF, updated variable and fixed-flavour schemes for heavy quarks, interface to the APFEL library and n-space evolution program MELA, updates to the latest theory calculations, fast grid tools and many more.

We will also report the highlighted results based on the xFitter functionalities, as well as novel studies performed by xFitter.

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