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The photon PDF from high-mass Drell Yan data at the LHC using xFitter

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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 state-of-the-art theoretical developments. We present a novel determination of the photon PDF from fits to the recent ATLAS measurements of high-mass Drell-Yan production at 8 TeV.

This analysis is based on the new xFitter framework which has required improvements both in the APFEL program, to account for NLO QED effects for the first time, and in the aMCfast interface to account for the photon-initiated contributions in the EW calculations within MadGraph5_aMC@NLO.

The results are compared with other recent QED fits and determinations of the photon PDF, where consistent results are found.

Experimental Collaboration

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