

Parton Distributions for the LHC Run II (20+10min)

Thursday 3 September 2015 11:30 (30 minutes)

I will present NNPDF3.0, the first set of parton distribution functions (PDFs) determined with a methodology validated by a closure test. NNPDF3.0 uses a global dataset including HERA-II deep-inelastic inclusive cross-sections, the combined HERA charm data, jet production from ATLAS and CMS, vector boson rapidity and transverse momentum distributions from ATLAS, CMS and LHCb, W+c data from CMS and top quark pair production total cross sections from ATLAS and CMS. I will explore some of the phenomenological implications of our results for the upcoming 13 TeV Run of the LHC. Then I discuss some recent developments in the NNPDF framework, including fits with threshold resummation, fits with running masses, the addition of more recent LHC datasets, and the Hessian representation of MC sets.

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