

PDF4LHC Future

History

- Started as a follow up at the end of the HERA4LHC Workshops
- Continue to have a forum for discussions on PDF developments and ideas
- Mandate (CERN Management)
 - Advice on the best PDF envelope to be used for the LHC
 - How to best exploit LHCs for PDF info

Today

- Interim report completed
- Final cosmetics & author list details being completed (interrupt due to US Holiday)
- Interim recommendation being used by e.g. CMS in a number of key papers
- Followed by the Higgs working group

Interim Report

The PDF4LHC Working Group Interim Report

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Abstract

This document is intended as (1) a study of benchmark cross sections at the LHC (at 7 TeV) at NLO using modern PDFs currently available and (2) an interim summary of the current recommendations of the PDF4LHC working group for the use of parton distribution functions (PDFs) and of PDF uncertainties at the LHC, for cross section and cross section uncertainty calculations. It also contains a succinct user guide to the computation of PDFs, uncertainties and correlations using available PDF sets.

Authors to be notified
for final sign off this week

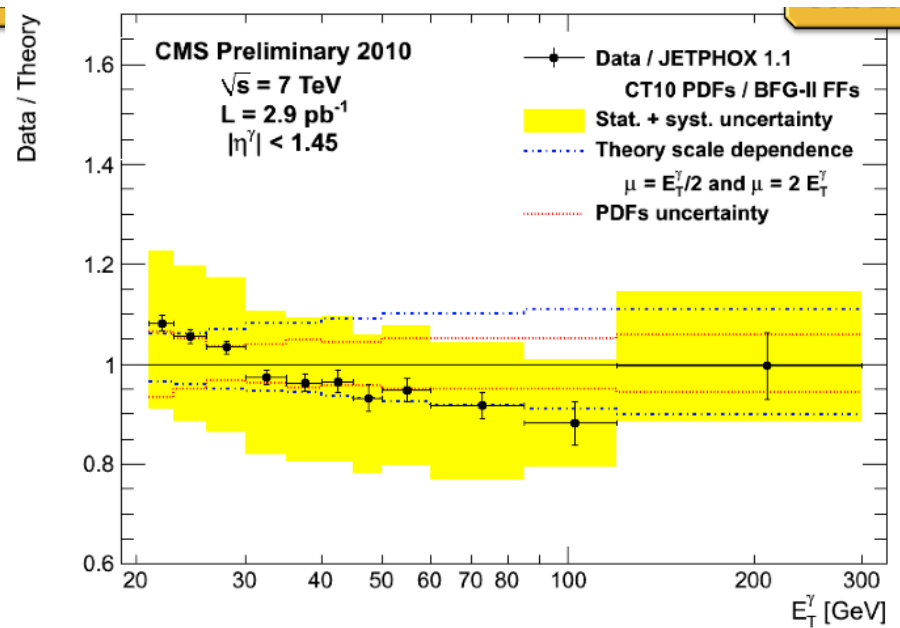
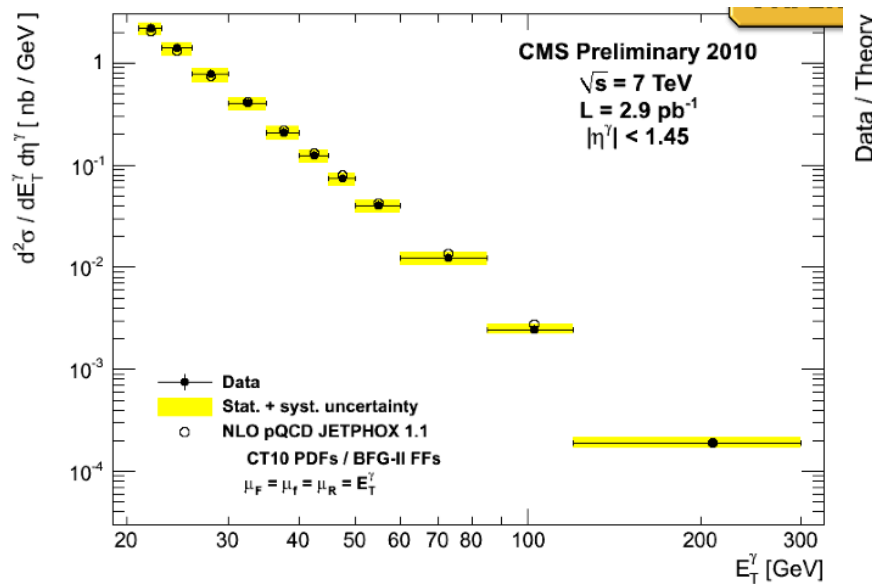
Some very final plots still
being completed.

Future

- PDF4LHC generally seen as a very useful discussion forum for PDF questions
- Reaching a level of high sophistication and detailed understanding of PDFs. Clearly not a simple subject
- New data coming, most notably:
 - HERA precision data (High x , Heavy Flavours...)
 - The LHC data.

LHC Data coming!

Prompt photon production in pp



W and Z data (ratios, asymmetries) coming up soon

Future

- Many topics of study to be explored further
 - Heavy flavors (HF data from HERA wanted)
 - α_s studies
 - NNLO
 - Include new data in the fits
 - Benchmark points/TH uncertainties
 - Total uncertainties
 -
- Update recommendation in due time

Future

- More groups now active on global PDFs compare to a few years back. Extend PDF4LHC steering?
- Next meetings
 - Open to proposals, but CERN will stay a central place for meetings.
 - Next meeting proposed for 2nd (1st) week of March: 11th of March (backup proposal 4th of March) Please send feedback...