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Benchmarking for PDF4LHC20

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A number of PDF sets have either recently been produced (CT18), or will be coming out in the near future (from MMHT, NNPDF), utilizing high statistics, high precision data from the LHC. In 2015, an intense year-long benchmarking exercise was carried out among the global PDFs then available (CT14, MMHT2014, NNPDF3.0). This exercise allowed a better understanding of the relative influence of the common data sets used in each PDF fit and the relationship between the PDF uncertainties calculated using the different techniques. This study allowed a combination of all three global PDFs in one common framework (PDF4LHC15). The PDF4LHC15 PDFs are now frequently used for theoretical precisions for the LHC. A new benchmarking exercise is now underway among the PDF sets containing precision LHC data that will lead to a future PDF4LHC20 set of PDFs. This talk will discuss the framework for the benchmarking and the available results.

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