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CTEQ-TEA parton distributions with the LHC data

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I review recent developments in the global QCD analysis by the CTEQ-TEA group that follows the public release of the new CT18 NNLO parton distributions last year [arXiv:1912.10053]. The role of LHC experiments at 7, 8, and 13 TeV in constraining the CT PDFs is discussed. Theoretical and methodological advancements aimed at obtaining reliable central PDFs and their uncertainties are reviewed, including NNLO corrections, advanced parametrization forms, small-x saturation scale, alternative tolerance definitions.

Primary authors: NADOLSKY, Pavel (Southern Methodist University);   HOU, Tie-Jiun (Northeastern University);   GAO, Jun;   XIE, Keping (PITT PACC);   HOBBS, Tim (SMU);   Prof. GUZZI, Marco (Kennesaw State U.);   DULAT, Sayip;   SITIWALDI, I.;   HUSTON, Joey (Michigan State University);   STUMP, Daniel;   SCHMIDT, Carl (Michigan State University);   YUAN, C.-P. (MSU)

Presenter: NADOLSKY, Pavel (Southern Methodist University)

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