



Contribution ID: 186

Type: Parallel Session Talk

The LHC experimental data in the CT18 global QCD analysis

Tuesday 9 April 2019 17:06 (17 minutes)

The sheer volume of the LHC experimental data sensitive to the hadronic structure presents a formidable challenge for the global QCD analysis. In the CT18 global analysis, we implemented new approaches to streamline identification of the LHC experiments that have the greatest promise for constraining parton distributions in the nucleon at the next-to-next-to-leading order accuracy. Toward this goal, we augment the global PDF fits with fast data surveys in the Hessian approach using new computer programs ePump and PDFSense, as well as with detailed Lagrange Multiplier studies. A combination of these techniques delivers a detailed map of constraints on the hadron structure from multiple experiments.

Authors: HOU, Tie-Jiun (Northeastern University, China); Prof. DULAT, Sayipjamal (Xinjiang University); HUSTON, Joey (Michigan State University); GAO, Jun (Shanghai Jiao Tong University); GUZZI, Marco (Kennesaw State University); HOBBS, Timothy (Southern Methodist University); NADOLSKY, Pavel (Southern Methodist University); PUMPLIN, Jon (Michigan State University); SCHMIDT, Carl (Michigan State University); XIE, Keping (Southern Methodist University); YUAN, C.-P. (Michigan State University)

Presenter: NADOLSKY, Pavel (Southern Methodist University)

Session Classification: WG1: Structure Functions and Parton Densities

Track Classification: WG1: Structure Functions and Parton Densities