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Nuclear parton distribution functions with nCTEQ

Wednesday, 16 November 2022 11:00 (20 minutes)

Science is entering a new era in the investigation of nuclear matter, driven by a wealth of precision data from the JLab, HERA, RHIC & LHC experiments. The nCTEQ project employs cutting-edge theoretical techniques to analyse these data sets comprehensively. In my talk I will review some of the most recent advances in the nCTEQ approach including 1) the addition of heavy-quark production data from the LHC in order to constrain the nuclear gluon PDF down to very small values of x ; 2) the careful reanalysis of neutrino DIS data improving the determination of the strange-quark content and aiding flavour separation; 3) the implications of a new nPDF parametrisation inspired by Short Range Correlations at high x .

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