Contribution ID: **452** Type: **Contributed Talk**

nCTEQ15HIX - Extending nPDF Analyses into the High-x, Low Q2 Region

Wednesday, 14 April 2021 08:18 (18 minutes)

We use the nCTEQ analysis framework to investigate nuclear Parton Distribution Functions (nPDFs) in the region of large x and intermediate-to-low Q, with special attention to recent JLab Deep Inelastic Scattering data on nuclear targets. This data lies in a region which is often excluded by W and Q cuts in global nPDF analyses. As we relax these cuts, we enter a new kinematic region, which requires new phenomenology. In particular, we will present the impact of i) target mass corrections, ii) higher twist corrections, iii) deuteron corrections, and iv) the shape of the nuclear PDF parametrization at large-x close to one. Using the above tools, we produce a new nPDF set (named nCTEQ15HIX) which yields a good description of the new JLab data in this challenging kinematic region, and displays reduced uncertainties at large x, in particular for up and down quark flavors.

Primary author: SEGARRA, Efrain (Massachusetts Institute of Technology)

Presenter: SEGARRA, Efrain (Massachusetts Institute of Technology)

Session Classification: Structure function and parton densities

Track Classification: Structure Functions and Parton Densities