

Impact of JLab22 on unpolarized PDFs at large x

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We present a first analysis by the CTEQ-JLab (CJ) Collaboration of the potential impact of data from a 22 GeV upgrade of Jefferson Lab on parton distribution functions (PDFs) in the large-momentum fraction (large x) region. Using Monte Carlo pseudodata generated for the kinematic coverage of Hall C, we examine the constraints that these new data could provide on PDFs, Higher-Twist (HT) corrections, and nuclear nonperturbative corrections with a deuteron target. Such new constraints at large x could significantly improve our understanding of hadron structure and address limitations in current models, opening new avenues for both experimental and theoretical research.

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