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Study of proton parton distribution functions at high x

Tuesday, March 24, 2020 4:30 PM (15 minutes)

Proton parton distribution functions (PDFs) are poorly constrained by existing data for Bjorken x larger than 0.6, and the PDFs extracted from global fits differ considerably from each other. A technique for comparing predictions based on different PDF sets to observed event numbers is presented. It is applied to compare predictions from the most commonly used PDFs to published ZEUS data at high Bjorken x. A wide variation is found in the ability of the PDFs to predict the observed results. A scheme for including the ZEUS high-x data in future PDF extractions is discussed.

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Session Classification: Structure function and parton densities

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