

Recent NNLO PDF fits with HERA jet data

Tuesday 26 November 2019 11:55 (25 minutes)

Abstract: The HERA collaborations H1 and ZEUS have performed new PDF fits including their latest jet data. A joint PDF fit of H1 and ZEUS jet and inclusive data is performed in the HERAPDF style at NNLO QCD. Scale uncertainties are reduced significantly with respect to the corresponding fit at NLO. The preliminary result is $\alpha_S(M_Z)=0.1150 \pm 0.0008(\text{exp}) \pm 0.0002-0.0005(\text{mode/param}) \pm 0.0006(\text{hadr}) \pm 0.0027(\text{scale})$. The H1 collaboration performed a PDF fit of inclusive diffractive data together with diffractive jet data at NNLO QCD. This results in a more precise determination of diffractive parton densities and improved predictions of diffractive jet production cross sections.

Presenter: Dr WICHMANN, Katarzyna (DESY)

Session Classification: Standard Model