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Inclusive-jet production in NC DIS with HERA II

Content :
Differential inclusive-jet cross sections have been measured in neutral current deep inelastic ep scattering for boson virtualities Q2 > 125 GeV2 with the ZEUS detector at HERA using an integrated luminosity of 300 pb-1. Jets were identified in the Breit frame using the kt cluster algorithm in the longitudinally inclusive mode. Single-differential cross sections are presented as functions of Q2, the jet pseudorapidity, etajb, and the jet transverse energy, etjb. In addition, measurements of double-differential inclusive-jet cross sections are presented as functions of etjb in different regions of Q2. Next-to-leading-order QCD calculations give a good description of the measurements. A value of alphas(Mz) has been extracted from the measurements of the single-differential cross-section dsigma/dQ2 for Q2 > 500 GeV2. The double-differential cross sections have the potential to constrain the gluon density in the proton when included as input to fits to extract the proton parton distribution functions.

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Comments :

These results will be presented on behalf of the ZEUS collaboration