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Forward Jet Production at HERA

H1 Collaboration

Abstract

One of the advocated footprints of BFKL dynamics in deep -inelastic electron-proton collisions is the measurement of forward jet cross sections and characteristics. Forward jets are jets which are produced with a small angle with respect to the incident proton direction. Forward jet cross sections, measured with the H1 detector are presented as a function of Bjorken-x, for jets produced with an angle to the proton direction, θ_{jet}, in the range $7 < \theta_{jet} < 20^o$. The cross sections are determined for various values of the minimum jet transverse energy. The azimuthal angle distribution of the forward jet relative to the scattered electron is studied. The results are compared with predictions of analytical BFKL calculations and NLO calculations based on exact matrix elements.

Plenary Sessions:
4. QCD and Low x Physics - H. Abramowicz, R. Brock
Parallel Session: I Strong Interaction Physics
3. Structure Functions and Low x Physics
4. Hard Processes and Perturbative QCD