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Measurement of the Inclusive Photoproduction Cross Section for High-p_t Charged Particles at HERA

H1 Collaboration

Abstract

A new measurement is presented of high p_t charged particle cross sections in photoproduction (γp) at the HERA e^+p collider. The e^+p data sample amounts to 1.3 pb^{-1} taken in 1994 with the H1 detector. The measurement is for an average centre of mass energy of $W_{\gamma p} = 200$ GeV, and the γp cross sections are extracted from e^+p collisions with small $Q^2 < 0.01$ GeV^2 as a function of p_t and pseudorapidity η. The statistics of this new measurement permit measurements to be extended to $2 < p_t \sim 12\,\mathrm{GeV}$. The sensitivity of the photon structure function to the η dependence of the cross section is presented.

Plenary Sessions:
2. Soft Interactions and Diffraction Phenomena - S. Levonian
4. QCD and Low x Physics - H. Abramowicz, R. Brock
Parallel Session: I Strong Interaction Physics
2. Soft Interactions
3. Structure Functions and Low x Physics
4. Hard Processes and Perturbative QCD