May 25th 1996
Abstract pa02-064 submitted to the 28th International Conference on High Energy Physics ICHEP'96, Warsaw, Poland, July 1996

Elastic Electroproduction of ϕ and ω Mesons at large Q^2 at HERA

H1 Collaboration

Abstract

A measurement of the cross section for the elastic electroproduction of ϕ mesons is presented in the range $6.0 < Q^2 < 20.0\,\mathrm{GeV}^2$ and $40 < W < 130\,\mathrm{GeV}$ using data obtained with the H1 detector in 1994. The data correspond to an integrated luminosity of $2.5\,\mathrm{pb}^{-1}$. The cross section is measured as a function of Q^2 and of the total hadronic mass W. The ratio of the production cross sections for ϕ and for ρ mesons is found to increase with Q^2. For the same values of Q^2, this ratio is observed to be higher for the W of this measurement than for the W of fixed target experiments. The spin polarisation of the electroproduced ϕ mesons is presented. A measurement of the cross section for the elastic electroproduction of ω at high Q^2 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