June 25th 1996
Abstract pa03-048 submitted to the 28th International Conference on High Energy Physics ICHEP'96, Warsaw, Poland, July 1996

Polarisation Study of High Q^2 Elastic ρ Meson Production at HERA

H1 Collaboration

Abstract

Results on the decay angular distributions of ρ mesons elastically electroproduced at HERA are presented, for high photon virtuality ($Q^2 > 8\,\mathrm{GeV}^2$) and high $\gamma^* p$ centre of mass energy ($W \simeq 100\,\mathrm{GeV}$). The $\cos\theta$ distribution indicates that the final state ρ mesons are mostly longitudinally polarised. The ψ distribution in combination with the $\cos\theta$ distribution supports the s-channel helicity conservation (SCHC) hypothesis. The ratio R of the cross sections for ρ production by longitudinal and transverse virtual photons is then computed for bins in Q^2 and W.

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