

Exclusive production at HERA

Tuesday, 11 September 2012 18:10 (20 minutes)

Summary

The exclusive photoproduction reaction $\gamma p \rightarrow \text{Upsilon}(1S) p$ has been studied with the ZEUS detector in ep collisions at HERA.

The exponential slope, b , of the t dependence of the cross section, where t is the squared four-momentum transfer at the proton vertex, has been measured. This constitutes the first measurement of the t dependence of the $\gamma p \rightarrow \text{Upsilon}(1S) p$ cross section.

The differential cross sections as a function of t at lower energies were studied in exclusive diffractive photoproduction of J/ψ mesons with the H1 detector.

The exclusive electroproduction of two pions was measured by the ZEUS experiment. The two-pion invariant-mass distribution is interpreted in terms of the pion electromagnetic form factor, assuming that the studied mass range includes the contributions of the ρ , ρ' and ρ'' vector-meson states.

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Session Classification: Diffraction in e-p Collisions (III)

Track Classification: Diffraction in e-p collisions (experiment)