

Abstract ID : 776

Two pion diffractive electro-production

Content :

Diffractive electroproduction of pion pairs at HERA has been studied with the ZEUS detector. The analysis was carried out in the kinematic range of photon virtuality $2 < Q^2 < 80 \text{ GeV}^2$, γ^*p center-of-mass energy $40 < W < 180 \text{ GeV}$ and two-pion invariant mass $0.28 < M(\pi\pi) < 2.3 \text{ GeV}$. The $\pi^+\pi^-$ invariant-mass distribution was analyzed in terms of three isovector resonances: ρ , ρ' and ρ'' . Masses and widths as well as relative amplitudes were obtained using a fit to the pion electromagnetic form factor. The Q^2 dependence of the pion form factor was studied.

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Track classification : 03 - Perturbative QCD, Jets and Diffractive Physics ; 04 - Hadronic Structure, Parton Distributions, soft QCD, Spectroscopy

Contribution type : Parallel Session Talk

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Submitted on Friday 14 May 2010

Last modified on : Friday 14 May 2010

Comments :

These results will be presented on behalf of the ZEUS Collaboration