Exclusive pion electroproduction at HERMES

C. Hadjidakis
on behalf of the HERMES collaboration

INFN - Laboratori Nazionali di Frascati, 00044 Frascati, Italy

Hard exclusive production in deep inelastic lepton scattering provides access to the unknown Generalized Parton Distribution functions (GPD) of the nucleon which give a unified description of hadronic structure. This talk will report on the hard exclusive π^+ production measurement with a 27.6 GeV positron beam energy on a hydrogen target at HERMES. Two GPD functions are involved in this process: $\tilde{H}$ and $\tilde{E}$, respectively the pseudovector and pseudoscalar contributions. In particular, the latter one is related to the pion form factor. Final results for the single spin asymmetry (SSA) with a longitudinal polarized target will be presented [1]. Preliminary results for the unpolarized total cross section up to $Q^2 = 8 GeV^2$ and for the SSA measurement with a transverse polarized target will also be reported.

[1] A. Airapetian et al., Phys. Lett. B535 (2002) 85

E-mail: cynthia@lnf.infn.it