

Electroproduction of π^0 and η in the resonance region at high Q^2 with CLAS

Maurizio Ungaro, Kyungseon Joo
for the CLAS collaboration

October 23, 2009

Abstract

An extensive program is underway at Jefferson Lab to study the electromagnetic excitations of baryon states. We report the analysis of exclusive single π^0 and η electroproduction in the resonance region at Jefferson Lab in the Q^2 range of 2 to 6 GeV^2/c^2 . A longitudinally polarized 5.75 GeV electron beam was incident on a 5 cm long liquid Hydrogen target. The CLAS spectrometer at Jefferson Lab was used to detect the final state particles. The average beam polarization was 70%. The data was taken between October 2001 and January 2002. Preliminary differential cross sections over the entire 4π *c.m.* solid angle will be presented, along with beam spin asymmetries. Preliminary structure functions will be shown. This high precision measurement will allow us to access the structure and dynamics of nucleon excitations with masses up to 2 GeV .