Double and target asymmetries for the $ep \to e'p\pi^0$ production

ANGELA BISELLI, Fairfield University, CLAS COLLABORATION — An extensive experimental program to measure the spin structure of the nucleons is carried out in Hall B with the CLAS detector at Jefferson Lab using a polarized electron beam incident on a polarized target. Spin degrees of freedom offer the possibility to test, in an independent way, existing models of resonance electroproduction. The present analysis selects the exclusive channel $p(e',e,p)\pi^0$ from data taken in 2000-2001, to extract single and double asymmetries in a $Q^2$ range from 0.2 to 0.75 GeV$^2$ and a $W$ range from 1.1 to 1.6 GeV. Results of the asymmetries will be presented as a function of the center of mass decay angles of the $\pi^0$ and compared with the unitary isobar model MAID [1], the dynamic model by Sato and Lee [2] and the dynamic model DMT [3].


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