Testing Analysis Algorithms for the ^{2}H(e, e′p)n **Reaction** CALINA A. COPOS, GERARD P. GILFOYLE, University of Richmond, CLAS COLLABORATION — We have measured the asymmetry $A_{LT'}$ of the ^{2}H(e, e′p)n reaction in quasielastic kinematics at a beam energy of 2.56GeV over a 4-momentum transfer range $Q^2 = 0.2 - 2.0 (GeV/c)^2$ with the CLAS detector at Jefferson Lab. We have performed a Monte Carlo simulation of the reaction in order to test the analysis code used to extract $A_{LT'}$ associated with the fifth structure function. The Hulthen distribution was used to select the magnitude of the internal Fermi momentum of the target nucleon and the direction was chosen isotropically. The direction and Fermi momentum of the target nucleon were weighted by integrating the elastic cross section in the frame of reference of the moving nucleon over the CLAS acceptance. A fit to the measured $A_{LT'}$ was incorporated into the Monte Carlo simulation to model the fifth structure function. The GEANT3-based code GSIM was used to simulate the CLAS detector. Monte Carlo events were analysed with the same code used to extract $A_{LT'}$ from the experimental data. We simulated quasielastic scattering at a beam energy of 2.56GeV using two polarities of the CLAS toroidal magnet.The asymmetry extracted from Monte Carlo events is consistent with the input function for the asymmetry within the uncertainties of the calculation.

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