

Abstract Submitted
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Parity-Violating Asymmetry in the Nucleon to Delta Transition

C.L. CAPUANO, College of William and Mary, G⁰ COLLABORATION — The G⁰ collaboration at Jefferson Lab has measured the parity-violating asymmetry of polarized electrons scattered inelastically from the proton. Data were obtained for inclusive pion electroproduction at a beam energy of 687 MeV, with the scattered electrons detected at backward angle ($\theta_e \sim 110^\circ$). These data will be used to extract the axial vector transition form factor $G_{N\Delta}^A$ for Q^2 in the range $0.3 \text{ GeV}/c^2 < Q^2 < 0.4 \text{ GeV}/c^2$. $G_{N\Delta}^A$ characterizes the intrinsic spin response of the nucleon during the transition to its first excited state, the $\Delta(1232)$. This experiment represents the first determination of this quantity using a neutral current probe. Preliminary results will be presented.

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