

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

C.L. CAPUANO, College of William and Mary, G<sup>0</sup> COLLABORATION — The G<sup>0</sup> collaboration at Jefferson Lab has taken data on the parity-violating asymmetry for the inelastic scattering of electrons from the proton. Data were obtained for inclusive pion electroproduction at two beam energies (362 MeV and 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  $G_{N\Delta}^A$  as a function of  $Q^2$  for  $0.05 \text{ GeV}/c^2 < Q^2 < 0.5 \text{ GeV}/c^2$ .  $G_{N\Delta}^A$  characterizes the intrinsic spin response of the nucleon during its transition to its first excited state. This experiment represents the first determination of this quantity using a neutral current probe. Data obtained with a deuterium target will also be studied. The status of the data analysis for both hydrogen and deuterium will be presented.

David Armstrong  
College of William and Mary

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