

Abstract Submitted
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Determination of Observables from Double-Polarization Photo-production RANDALL MCCLELLAN, Florida State University, CLAS COLLABORATION — A key technique in the study of poorly established and unobserved baryon resonances is polarization observables in meson production experiments. These asymmetries, sensitive to weak resonance contributions, will provide additional constraints and therefore eliminate ambiguous solutions characteristic of unpolarized data. In addition, the majority of our “baryon” knowledge is based on pion-nucleon scattering experiments. By employing photoproduction, states that have proved elusive due to weak coupling to pion-nucleon interactions may be more easily seen. The combination of a polarized photon beam and polarized target provides a unique and unprecedented look into the excited states of the nucleon. The CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Laboratory, Newport News, Virginia, is an excellent tool for observing circularly and linearly polarized light incident on a longitudinally-polarized frozen spin butanol target (FROST). CLAS has accumulated double-polarization data from November 2007 to February 2008 and the debut of the butanol target has exceeded expectations. The FROST data provide (nearly) complete experiments for a variety of different photoproduction reactions. This contribution will present the status of the experiment and outline plans for the determination of polarization observables in double-pion production.

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