

Abstract Submitted
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Analysis of the polarization observables H and P for $\vec{\gamma} \vec{p} \rightarrow \pi^+ n$ ¹

ROBERT J. LEE, B.G. RITCHIE, M. DUGGER, Arizona State Univ, CLAS COLLABORATION — A search is underway to find baryon resonances that have been predicted, but yet remain unobserved. Nucleon resonances, due to their broad energy widths, overlap and must be disentangled in order to be identified. Meson photo-production observables related to the orientation of the spin of the incoming photon and the spin of the target proton are useful tools to deconvolute the nucleon resonance spectrum. These observables are particularly sensitive to interference between phases of the complex amplitudes. A set of these observables has been measured using the CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab with linearly-polarized photons having energies from 725 to 2100 MeV with polar angle values of $\cos(\theta_{C.M.})$ between 1 and -0.8 and transversely-polarized protons in the Jefferson Lab FROzen Spin Target (FROST). By fitting π^+ yields over azimuthal scattering angle, the observables H and P have been extracted. Preliminary results for these observables will be presented and compared with predictions provided by SAID Partial-Wave Analysis Facility.

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