

Abstract Submitted
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Measurement of $\pi^+\pi^-$ Photoproduction In Double-Polarization Experiments using CLAS CHARLES HANRETTY, Florida State University, CLAS COLLABORATION — Discussion will be given on an upcoming double-polarization experiment using a tagged-photon beam and the CLAS spectrometer at Jefferson Lab in Newport News, VA. Constituent quark models (CQMs) predict numerous baryon resonances that have not been experimentally verified and are thus “missing.” CQMs also predict a strong coupling of these states to γp as well as to $p\eta$ or $\Delta\pi$ making photoproduction experiments a promising method to find these missing resonances. Previous analyses show that constraints provided by polarization observables are important because analyses of unpolarized data often result in ambiguous solutions. A linearly- and circularly-polarized photon beam will be incident on a polarized butanol target in Hall B’s CLAS detector. This detector allows for the use of a longitudinally- or transversely-polarized frozen spin target (FROST) giving rise to nine double-polarization observables in $\pi^+\pi^-$ production. Studies of the sensitivity of these observables to baryon resonances will be discussed.

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