

The Photoproduction of Strangeness in $\gamma p \rightarrow \Lambda K^+ \pi^+ \pi^-$ with CLAS at Jefferson Lab

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Following the prediction of exotic states by Quantum Chromodynamics, the search for new and exotic mesons has become a priority in nuclear physics. The g12 Experiment, using the CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab, has provided a large photoproduction dataset. This experiment used a liquid hydrogen target, a 4 - 5.5 GeV tagged photon beam, and acquired 26 billion events. The reaction $\gamma p \rightarrow \Lambda K^+ \pi^+ \pi^-$ provides an opportunity for searching for excited strange mesons, in the $K^+ \pi^+ \pi^-$ system, using the g12 dataset. In this reaction, the Λ is identified via the $p \pi^-$ decay. Studies indicate two dominating decay modes: the $K^*(982)\pi$ mode, and the $K^+ \rho$ mode. Preliminary results will be presented in this talk, along with the kinematics and dynamics of this reaction. Future plans, including partial wave analysis of the dataset, will be discussed briefly.