

Abstract Submitted  
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**Determination of the Hyperon Induced Polarization and Polarization–Transfer Coefficients for Quasi-Free Hyperon Photoproduction off the Bound Neutron**<sup>1</sup> COLIN GLEASON, University of South Carolina, CLAS COLLABORATION — Measurement of the excited nucleon ( $N^*$ ) spectrum provides key information on the relevant degrees of freedom within the nucleon and requires an extensive set of experimental observables over a broad kinematic range for many nuclear reactions. Polarization observables from kaon-hyperon (KY) channels are needed as many resonances predicted by quark models, but not observed in  $\pi N$  channels, are expected to couple strongly to KY channels. While in the last decade data has been published for KY off the proton, data off the neutron are scarce. In this talk we will show preliminary results for  $P$ ,  $C_X$ , and  $C_Z$  for the reaction  $\gamma d \rightarrow K^0 \Lambda(p)$  for  $E_\gamma$  between 0.9–2.6 GeV and  $\cos\theta_{K^0}^{CM}$  between -0.9–1. The data was collected in experiment E06-103 (g13) with the CLAS detector at Thomas Jefferson National Accelerator Facility using a circularly polarized photon beam and an unpolarized LD2 target. We will discuss the effect of neutron binding on the observables and the comparison of our results with theoretical predictions. Our study is part of a larger effort by the g13 group to provide cross-sections and polarization observables for meson photoproduction off the neutron and is expected to have a large impact on the  $N^*$  research.

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