

Abstract Submitted
for the APR08 Meeting of
The American Physical Society

Photoproduction of the Sigma(1385) resonance at LEPS¹ KENNETH HICKS, Ohio University, LEPS COLLABORATION — The Sigma(1385) hyperon resonance has been measured using the LEPS detector at the SPring-8 facility in Japan. Linearly polarized photons in the range of 1.5-2.4 GeV were incident on a liquid deuterium target, producing a K^+ and a π^- in the final state. The negative Sigma(1385) was isolated by its decay to $(\Lambda\pi^-)$ using the missing mass technique. The same final state particles can also be used to identify photoproduction of the Σ^- ground state via its decay to $(n\pi^-)$. Using simulations to correct for the detector acceptance, it will be possible to link the cross sections for the Sigma(1385) to the previously measured cross sections for photoproduction of $K^+\Sigma^-$. Theoretical calculations for photoproduction of $K^+\Sigma^{*-}$ from the neutron are in progress, and will be discussed along with the data analysis of this reaction.

¹Supported in part by the NSF

Kenneth Hicks
Ohio University

Date submitted: 16 Jan 2008

Electronic form version 1.4