Abstract Submitted
for the APR10 Meeting of
The American Physical Society

Photoproduction of the exclusive $\gamma p \to K^{*+}Y$ reaction ($Y = \Lambda$ or Σ^0) at CLAS WEI TANG, DUSTIN KELLER, KENNETH HICKS, Ohio University, CLAS COLLABORATION — The reaction $\gamma p \to K^{*+}\Lambda$ has been measured at Jefferson Lab using the CLAS detector with tagged photons in the energy range of 1.6-3.8 GeV. Previously reported data for this reaction are either preliminary or were done decades ago with less precision. The K^{*+} was identified directly from its decay products, and the Λ of Σ^0 final state was determined from the technique of missing mass. Cross sections for this reaction will be presented, along with preliminary results for the Lambda recoil polarization. Calculations for this reaction have been published from theoretical models, indicating that the cross sections are sensitive to whether a scalar meson $J^P = 0^+$ with a strange antiquark may exist. Suggestions for the physical interpretation of these data will be briefly discussed.

Wei Tang
Ohio University

Date submitted: 26 Oct 2009 Electronic form version 1.4