Abstract Submitted
for the APR18 Meeting of
The American Physical Society

A study of the $\gamma p \to K^+\Lambda^*$ reaction UTSAV SHRESTHA, TAYA CHETRY, KENNETH HICKS, Ohio Univ, CLAS COLLABORATION — Much is known about the photoproduction of the hyperon resonances $\Lambda(1405)1/2^-$ and $\Lambda(1520)3/2^-$, but little is known about photoproduction to the higher-mass resonances $\Lambda(1670)1/2^-$ and $\Lambda(1690)3/2^-$. Both pairs of resonances are spin-orbit partners and are rated as 4-star (well-known) by the Particle Data Group. In the quark model, the $\Lambda(1405)$ and $\Lambda(1520)$ resonances are assigned to the SU(3) singlet, where the $\Lambda(1670)$ and $\Lambda(1690)$ are assigned to the octet. In this presentation, we will present a first look at photoproduction data for these hyperon octet resonances using data from the CLAS detector at Jefferson Lab. Future plans for a partial wave analysis, which will be necessary to resolve the individual cross sections for these two resonances, will be outlined.

Utsav Shrestha
Ohio Univ

Date submitted: 14 Jan 2018 Electronic form version 1.4