Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Photoproduction of Baryon-Antibaryon Pairs at GlueX HAO LI, SAMUEL DAI, VIREN BAJAJ, NAOMI JARVIS, REINHARD SCHUMACHER, Carnegie Mellon University, GLUEX COLLABORATION — The mechanism of baryon-antibaryon photoproduction has not been extensively studied. Little is known about the dominant exchanges in the t-channel or the nature of baryon-like exchanges in the u- channel. At GlueX, we are studying the reactions $\gamma p \to \overline{\mathcal{B}}\mathcal{B}p$, where $\overline{\mathcal{B}}\mathcal{B}$ includes $\overline{p}p$ and $\overline{\Lambda}\Lambda$ (with $\Lambda \to \pi^- p, \overline{\Lambda} \to \pi^+ \overline{p}$). Data have been obtained from the respective reaction thresholds up to a beam energy of about 11 GeV. The reactions are also being studied with linearly polarized photons in the energy range between 8.4 and 9 GeV. Kinematic fitting is used for clean extraction of 3 and 5 body final states, respectively. Preliminary spectra from Spring 2016 data will be presented for the angular correlations among the produced particles and for some spin observables including the beam asymmetry Σ. We expect these measurements to allow identification of the dominant reaction mechanisms at GlueX energies.

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Date submitted: 29 Jun 2017 Electronic form version 1.4