Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Polarized Photoproduction of Hybrid Mesons with GlueX[1]
RICHARD JONES, University of Connecticut — The GlueX experiment uses a polarized 9 GeV photon beam incident on a fixed hydrogen target to generate mesons over a wide range in masses, with the goal of mapping the spectrum of exotic mesons in the light quark sector, and determining their widths and patterns of their decays. In the case of an unpolarized proton target, linear polarization of the initial-state photon provides a handle for separating the production rate of any given resonance into contributions from competing t-channel processes involving exchanges of opposite naturality. An example of how this is useful to help identify resonance behavior and extract weak resonant signals from a large background is presented. The GlueX experiment is scheduled to begin commissioning the photon beam line and detectors in Fall 2014, with the first polarized beam to follow in 2015.

[1]This work is supported by NSF grant 1207857

Richard Jones
University of Connecticut

Date submitted: 01 Jul 2014 Electronic form version 1.4