

Abstract Submitted  
for the DNP16 Meeting of  
The American Physical Society

**Photoproduction of Resonances at GlueX** JONATHAN ZARLING,  
Indiana Univ - Bloomington, GLUEX COLLABORATION — The spectrum of excited  $\rho$  mesons has long been a topic of interest. Recently, studies of the charmonium spectrum have revealed an apparent overabundance of vector mesons. In addition, lattice QCD calculations predict hybrid mesons with vector quantum numbers. This has generated a renewed interest in study of vector mesons composed of light quarks, where one might hope to draw parallels with charmonium and search for hybrid mesons. The GlueX experiment at Jefferson Lab, utilizing a linearly polarized photon beam near 9 GeV, is poised to improve knowledge of the spectrum of excited light vector mesons. In particular, we propose to study the reactions  $p^{+-}p$  and  $p^{00}p$ . While the vector mesons are expected to dominate the  $^{+-}$  channel, the  $^{00}$  channel can be used to constrain the tensor and scalar components of the  $\pi\pi$  production. Together these should allow an exploration of  $\pi\pi$  resonances, including excited  $\rho$  mesons.

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Date submitted: 01 Jul 2016

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