

Abstract Submitted  
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**Studies of  $\eta$  photo-production in the baryon resonance excitation region with CLAS<sup>1</sup>** IGOR SENDEROVICH, Arizona State University, CLAS COLLABORATION — Because the pseudoscalar  $\eta$  meson has zero isospin, exclusive  $\eta$  photo-production offers the feature of isolating  $N^*$  ( $I=1/2$ ) resonance states. This “isospin” filter property can be very useful in helping disentangle the broad and overlapping excitations that make up the nucleon resonance spectrum. For that reason, a program of measurements on  $\eta$  photo-production for the reaction  $\gamma p \rightarrow \eta p$  has been conducted using the Hall B CEBAF Large Acceptance Spectrometer at Jefferson Lab. Results for the differential cross-section and for single- and double-polarization observables will be summarized. The general outlook for the “complete experiment” program for disentangling nucleon resonances decaying to the  $p\eta$  channel will be discussed.

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