

Abstract Submitted  
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**Photo-production of  $\omega$  Meson Using CLAS at Jefferson Laboratory** ZULKAIDA AKBAR, Florida State Univ — Photo-production of  $\omega$  meson was studied using CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Laboratory. We have obtained preliminary results on two observables that have been measured from the reaction  $\gamma p \rightarrow p\omega$  : the differential cross section and the double polarization observable **E**. The differential cross section measurement was performed using tagged photon beam with energy range up to 5.4 GeV, incident on unpolarized liquid hydrogen target. While the double polarization observable **E** was measured using circularly-polarized tagged photon beam with energy range up to 2.4 GeV and longitudinally-polarized butanol target. The differential cross section as well as the polarization observable allow us to find the  $N^*$  resonances that decay to  $p\omega$  through multi-channel Partial Wave Analysis (PWA) method. They also provide a probe to test theoretical models about the production mechanism of  $\omega$  meson and also the scaling behavior of the cross section.

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