

Abstract Submitted  
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**Measurement of the Beam Asymmetry  $\Sigma$  in  $\pi^+ \pi^-$  Photoproduction using the CLAS Spectrometer at Jefferson Laboratory** CHARLES HANRETTY, Florida State University, + CLAS COLLABORATION — For an unambiguous extraction of resonance parameters via partial-wave analysis, not only unpolarized differential cross sections are needed, but also polarization observables. The beam asymmetry in double-pion production will provide important model constraints for the determination of resonance contributions to this reaction. The CLAS g8b experiment, as part of the  $N^*$  spectroscopy program at Jefferson Lab in Newport News, VA, has accumulated photoproduction data using a linearly-polarized tagged-photon beam incident on an unpolarized hydrogen target. The excellent degree of polarization reached values exceeding 90% at different positions of the coherent bremsstrahlung peak between 1.3 and 2.1 GeV. The g8b  $\pi^+ \pi^-$  data sample comprises of roughly 100M events and thus provides sufficient statistics to study the 5-dimensional observable  $\Sigma$  as a function of various masses and angles. In addition to  $\Sigma$ , preliminary results on the extraction of the additional observable  $I^s$  will be discussed, which arises for two pseudoscalar mesons in the final state.

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