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First Measurement of Differential Photoproduction Cross Sections for the $\Lambda(1405)$ **Using CLAS** KEI MORIYA, REINHARD SCHUMACHER, Carnegie Mellon University, CLAS COLLABORATION — The $\Lambda(1405)$ is a well-established hyperon state just below $N\overline{K}$ threshold. Although some properties were established in the early hadronic beam experiments of the 1960s, many experimental properties remain undetermined. In this talk we present preliminary results for the first measurements of the photoproduction differential cross section of the $\Lambda(1405)$ using CLAS at Jefferson Lab. The event sample consisted of $\sim 1.8 \times 10^5$ reconstructed $\Lambda(1405)$ hyperons photoproduced off the proton, with photon energies between 1.5 and 3.9 GeV. The differential cross section for the two charged $\Sigma\pi$ decay modes will be presented. For comparison, the $\Lambda(1520)$ differential cross sections derived from the same data set will be shown. Comparison of these hyperons may reveal clues to the internal structure of the $\Lambda(1405)$.

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