Measurement of Polarization Observables for the Λ in the reaction $\gamma p \to K^+\Lambda$.

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Spin observables are important to understand the production mechanisms of hyperons, as well as the contribution of intermediate baryon resonances. Λ polarizations observables have been studied extensively in the recent decades using the reaction $\gamma + p \to K^+ + \Lambda$. This talk presents the measurement of transferred polarization coefficients C_X and C_Z, and the induced polarization P, using a new set of high statistics data, obtained using the CEBAF Large Acceptance Spectrometer(CLAS) detector at Jefferson lab. The photon beam energy range is 1.117 to 5.45 GeV. These results (C_X, C_Z and P) are extracted simultaneously using the Maximum Likelihood Method. The measurements for C_X and C_Z have nearly an order of magnitude increase in events compared to previously published results and also extend the kinmatic range for $W > 2.46$ GeV, important for understanding the non-resonant contributions.