Polarization Observables for $\gamma p \rightarrow K^+\Lambda$ using polarized photons on a longitudinally polarized target

F.J. Klein, Catholic University of America, for the CLAS Collaboration

The latest highlights of the N* program at Jefferson Lab were the photoproduction experiments using frozen-spin targets inside the CLAS detector. All combinations of beam-target double-polarization observables were obtained for multiple reactions. Thanks to the self-analyzing properties of Λ all possible polarization observables for $K^+\Lambda$ are being extracted from the data resulting in a complete determination of the $K\Lambda$ amplitude, thus a least model-dependent determination of any resonances coupling to this channel. This talk will discuss the results of the first run period in 2007/2008 with longitudinally polarized frozen-spin target for this reaction: the beam-target asymmetries E and G as well as the target-recoil asymmetries L_x and L_z.