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Exclusive π^0 production and Compton scattering at GlueX[1]
ZACHARY BALDWIN, William Mary Coll, GLUEX COLLABORATION — The GlueX experiment in Jefferson Labs Hall D aims to explore the gluonic degrees of freedom within hadrons through high-energy meson photoproduction. Using a 9 GeV linearly-polarized photon beam, the first measurements of the Σ beam asymmetry for pseudoscalar production have already provided insight into the meson production mechanisms at these energies. In this work, studies of the reaction $\gamma p \to \pi^0 p$ will be presented along with an exploratory study of the Compton scattering process $\gamma p \to \gamma p$, utilizing the fine-grained calorimetry of the GlueX experiment.

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