

Abstract Submitted
for the SES20 Meeting of
The American Physical Society

Beam Asymmetry t -dependence for photoproduced η' at GlueX¹

CHURAMANI PAUDEL, JOERG REINHOLD, Florida International University, GLUEX COLLABORATION — The GlueX experiment is a photoproduction experiment which is located at Thomas Jefferson National Lab in Newport News, Virginia. We report on measurements of the beam asymmetry (Σ) in the reaction $\gamma p \rightarrow \eta' p$, using a tagged, linearly polarized 9 GeV photon beam incident on a liquid hydrogen target. A previous measurement, which was limited to momentum transfer up to $-t=0.9$ (GeV/c)², indicated that the reaction mechanism is dominated by ρ and ω meson exchanges [1]. Newly collected data with 3-4 times larger statistics will allow us to study whether this holds true at larger momentum transfer. We will present the preliminary results of the ongoing analysis for azimuthal angular distributions, yield asymmetries and extracted beam asymmetries as a function of $-t$ for different η' decay modes.

^{1*}This work was partially supported by the U.S. Department of Energy, Office of Science, Office of Nuclear Physics under contracts DE-SC0013620 and DE-AC05-06OR23177.

Churamani Paudel
Florida International University

Date submitted: 19 Oct 2020

Electronic form version 1.4