Abstract Submitted
for the DNP17 Meeting of
The American Physical Society

Beam Asymmetry of the $\eta'(958)$ meson through multiple decay channels in the GlueX Experiment TEGAN BEATTIE, ZISIS PAPANDREOU, Univ of Regina, JUSTIN STEVENS, College of William Mary, GLUEX COLLABORATION COLLABORATION — The $\eta(548)$ and $\eta'(958)$ mesons are two of the richest unflavoured light mesons readily available at GlueX energies for studying meson resonances. Many other light mesons have decay channels involving the η mesons with significant branching ratios, and $\pi\eta/\pi\eta'$ resonances are among the top contenders for possibly-accessible exotic and hybrid resonances which GlueX aims to study. As such, the ability to reconstruct pure η/η' samples and analyze their decays is of utmost importance for understanding future work on more complicated decay structures. One of the first observables we can measure is the Σ beam asymmetry, which for the η' has never been measured at beam energies above a few GeV. In this talk, preliminary analysis results for the η' beam asymmetry will be presented.

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Date submitted: 29 Jun 2017 Electronic form version 1.4