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Exclusive Eta and Eta Photoproduction and Beam Asymmetries at GlueX[1] WILL MCGINLEY, Carnegie Mellon University, TEGAN BEATTIE, ZISIS PAPANDREOU, University of Regina, CURTIS MEYER, Carnegie Mellon University, JUSTIN STEVENS, College of William & Mary, DAVE MACK, Jefferson Lab, GLUEX COLLABORATION — The GlueX experiment is a photoproduction experiment located at Thomas Jefferson National Accelerator Facility (TJNAF) in Newport News, Virginia. GlueX is capable of making beam asymmetry (Σ) measurements using a tagged, linearly-polarized 9 GeV photon beam incident on a hydrogen target. Measurements of the beam asymmetry for the exclusive reactions, $\gamma p \to \eta p$ and $\gamma p \to \eta' p$, will provide insight into the meson production mechanisms. GlueX measurements are the first beam asymmetry results for the η and η' in this energy range and are expected to further constrain Regge theory models for photoproduced pseudoscalar mesons. This talk will present results of the photon beam asymmetries as a function of the Mandelstam variable, t , for multiple η decay modes and the $\eta' \to \pi^+\pi^-\eta$ decay mode.

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