Primakoff photoproduction of η-mesons at GlueX (PrimEx-eta experiment)

The PrimEx-eta experiment aims to extract the η radiative decay width by measuring the cross section for η photo-production via the Primakoff Effect. This decay width will help with the determination of the $\eta - \eta'$ mixing angle and the ratio of the light quark masses. The experiment took data in Hall D at Jefferson Lab using the GlueX detector in 2019, 2021, and just recently in fall of 2022. We will describe the experimental technique, discuss the status of the experiment, and explain how we plan to extract the radiative decay width from measurement on a helium target.

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