

Light Meson Spectroscopy at GlueX

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GlueX at Jefferson Lab aims to study the light meson spectrum with an emphasis on the search for light hybrid mesons. To this end, a linearly-polarized 9 GeV photon beam impinges on a hydrogen target contained within a hermetic detector with near-complete neutral and charged particle coverage. In 2016, the experiment completed its commissioning and subsequently started to take data in its design configuration. With the size of the data set so far, GlueX already exceeds previous experiments for polarized photoproduction in this energy regime. A selection of early results will be presented, focusing on beam asymmetries for pseudo-scalar and vector mesons. The potential to make significant contributions to the field of light-meson spectroscopy is highlighted by the observation of several known meson resonances. Furthermore, the strategy to map the light meson spectrum with amplitude analysis tools will be outlined.

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