

# The GlueX Experiment: Status and Prospects

*Thursday, March 15, 2018 10:00 AM (30 minutes)*

If one examines the rules for constructing hadrons as suggested by the QCD Lagrangian, there is no obvious reason why nature should be limited to just quark-antiquark mesons and three-quark baryons. In the last decade, numerous new experimental results, primarily for hadrons containing charm quarks, suggest that the hadron spectrum may in fact contain more complex constructions of quarks and gluons. At the same time evidence for the existence of such states in the light quark system has also emerged from the high-intensity pion beam data collected at COMPASS. The GlueX experiment has presently collected the world's most statistically precise data for studying the photoproduction of mesons in the region up to charmonium threshold, which provides a unique new avenue for experimentally studying light hadron spectroscopy. I will discuss preliminary results obtained from these data and discuss the prospects for the GlueX physics program in the next few years.

**Primary author:** SHEPHERD, Matthew (Indiana University)

**Presenter:** SHEPHERD, Matthew (Indiana University)

**Session Classification:** Amplitude analysis and Light Quarks