Contribution ID : **40** Type : **plenary talk**

Latest Results from GlueX

Friday, 8 June 2018 10:00 (0:30)

Collaboration

GlueX

Abstract content

The GlueX experiment is housed in the newest experimental hall at the Thomas Jefferson National Accelerator facility in Newport News, Virginia. It was successfully commissioned in 2015 and is in its third year of data taking. GlueX uses a 12 GeV electron beam incident on a diamond radiator, producing a linearly polarized, coherent Bremsstrahlung photon beam. The ultimate goal of GlueX is to search for exotic hybrid mesons (e.g. qqg), with either exotic or conventional quantum numbers, whose existence, or lack thereof, would allow for the exploration of the gluon-gluon coupling present in QCD through the manifestation of hadrons with gluonic degrees of freedom. Photo-production at these energies is fairly unexplored and the polarization allows GlueX to discriminate between various production mechanisms which may be an effective way to identify such exotic hybrid mesons. In addition to exotic mesons, GlueX will also be poised to map out the conventional meson spectrum and to study the spectrum of excited vector mesons, which are often poorly understood. In this talk, we will present an overview of the GlueX experiment, its goals, current physics results, and future plans.

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Session Classification : Plenary Session