

Probing the hadron spectrum with the GlueX experiment at Jefferson Lab

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One of the primary goals of non-perturbative QCD is the understanding of the hadron spectrum. A particular interesting aspect is the question, if and where states comprising excited glue contribute to the spectra. This issue has been tackled by different experiments using various production mechanisms without conclusive answers. A complementary production mechanism is the use of photoproduction, which is utilized by the GlueX experiment at Jefferson Lab.

The GlueX experiment started data taking in 2017 and is focused on the measurement of neutral as well as charged final states at photon energies up to 12 GeV. An important tool is the use of linearly polarized photons, which allows to shed light on the question whether natural or unnatural exchange dominates in the production of different states. Various results have been extracted in the last years, ranging from the extraction of polarization observables for different final states over the investigation of excited Λ states to the determination of the J/Ψ cross section at threshold.

This presentation will show the current status of the GlueX experiment and give an overview about the results, which have been recently published.