

Search for exotic states in photo-production at GlueX

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Quantum Chromodynamics is the theory that describes how hadrons are built from quarks and gluons via the strong interaction. Many predictions have been observed, but many others are still pending and under experimental investigation. Of particular interest is how gluonic excitations give rise to exotic states. One class of such states are hybrid mesons that are predicted by theoretical models and Lattice Quantum Chromodynamics calculations. Searching and understanding the nature of these states is the one of the primary physics goal of the GlueX experiment at the CEBAF accelerator at Jefferson Lab in the US. We will give an overview on the experiment, and present the status of the search for a hybrid mesons candidate, namely the $Y(2175)$. This work is supported by HGS-HIRe.