Abstract Submitted
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Performance of the GlueX Barrel Calorimeter[1] ELTON SMITH, MARK DALTON, Jefferson Lab, Newport News, VA 23606, USA, WILLIAM MCGINLEY, Carnegie Mellon University, Pittsburgh, Pennsylvania 15213, USA, ZISIS PAPANDREOU, University of Regina, Regina, SK S4S 0A2, Canada, GLUEX COLLABORATION — The GlueX experiment at Jefferson Lab will search for exotic hybrid mesons, a new form of hadronic matter that exhibits gluonic degrees of freedom. We have taken data to commission the experiment and report here on the construction and performance of the electromagnetic barrel calorimeter (BCAL). The BCAL is a "spaghetti calorimeter," consisting of layers of corrugated lead sheets, interleaved with planes of 1-mm-diameter, double-clad, scintillating fibers, bonded in the lead grooves using optical epoxy. This detector consists of 48 modules that are readout using 3,840 large-area Multi-Photon Pixel counter (MPPC) arrays [1]. The measured width of the π^0 mass peak is approximately 10 MeV, only slightly higher than projections based on prototypes [2]. Systematic studies are underway to understand the contributions to the resolution and improve its performance.

[1] O. Soto *et al.,* NIM A732 (2013) 431.
[2] B.D. Leverington *et al.,* NIM A596 (2008) 327.

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