



# EXPERIMENTAL HALL D

at Thomas Jefferson National Accelerator Facility

The GlueX large-acceptance spectrometer uses linearly polarized photoproduction to:

- Explore the light-meson spectrum and search for exotic states with gluonic degrees of freedom
- Study charmonium production in the threshold region
- Measure the lifetime of pseudoscalar mesons and the polarizability of the pion
- Search for physics beyond the Standard Model using rare decays of the  $\eta$  and  $\eta'$  mesons
- Measure the excitation spectrum of strange and non-strange light baryons

## Additional experiments:

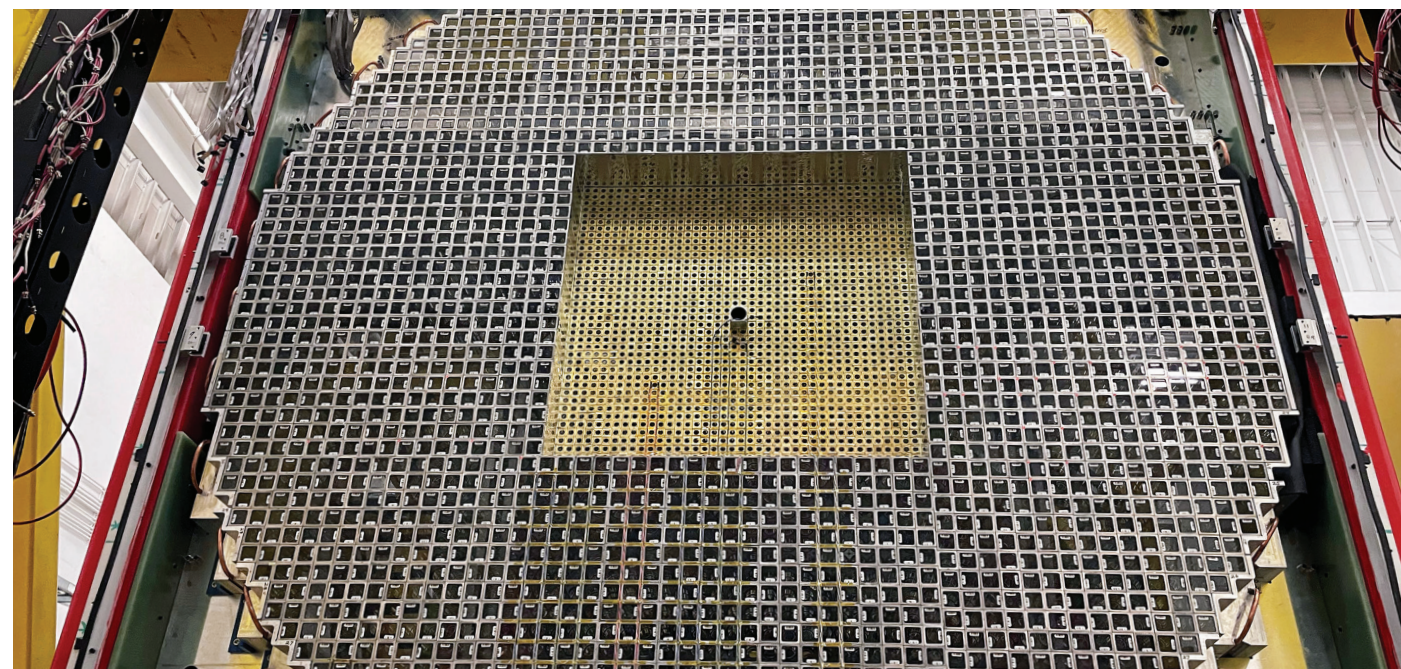
- Study the short-range correlated pairing of nucleons within nuclei
- The K-Long Facility Collaboration plans to use a tertiary beam of K-Long mesons to study strange mesons and baryons

**GlueX's international collaboration of scientists represents more than 30 institutions and 8 countries.**

## 8 COUNTRIES

Armenia, Canada, China, Germany, Greece, Russia, United Kingdom, and United States

Jefferson Lab



The upgraded forward electromagnetic calorimeter with lead-tungstate crystals in Experimental Hall D at Jefferson Lab.

## GLUEX COLLABORATION INSTITUTIONS

A.I. Alikhanyan National Science Laboratory (Yerevan Physics Institute); **Arizona State University\***; Carnegie Mellon University; Duke University; **Florida International University\***; Florida State University; GSI Helmholtzzentrum für Schwerionenforschung GmbH; Indiana University; Institute of High Energy Physics, Chinese Academy of Sciences; Lamar University; Mount Allison University; National and Kapodistrian University of Athens; National Research Centre Kurchatov Institute; National Research Nuclear University (MEPhI); **Norfolk State University\***; **North Carolina Agricultural and Technical State University\***; Old Dominion University; Ruhr-Universität Bochum; The Catholic University of America; The George Washington University; Tomsk Polytechnic University; Tomsk State University; Union College; University of Bonn; University of Connecticut; University of Glasgow; University of Massachusetts, Amherst; University of North Carolina at Wilmington; University of Regina; Virginia Tech; Washington & Jefferson College; William & Mary; Wuhan University

\* U.S. Historically Black Colleges and Universities  
• U.S. Hispanic-Serving Institutions