Contribution ID: **2** Type: **Invited**

Photophoroduction of Mesons

Saturday, 27 June 2026 10:00 (30 minutes)

The search for exotic hybrid mesons—states with explicit gluonic degrees of freedom—is a primary goal of modern hadron spectroscopy. Understanding the production mechanisms of conventional mesons is a prerequisite for identifying these exotic states. Photoproduction at Jefferson Lab provides a unique laboratory for this, utilizing the high-energy, linearly polarized photon beams of the GlueX and CLAS12 experiments.

A central theme of this discussion is the utilization of polarization observables for spectroscopy. We evaluate the extraction of spin density matrix elements (SDMEs) and beam asymmetries using both real and virtual polarized photon beams.

Furthermore, we discuss the current status of the search for exotic J^{PC} states. We highlight how the high-precision spin-physics data from JLab constrain the production models necessary for robust Partial Wave Analysis (PWA).

This presentation will include the latest available results and a look toward future developments in the JLab hadron spectroscopy program.

Collaboration

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Session Classification: Plenary session

Track Classification: Light mesons (production, spectroscopy, decays)