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Vector-Pseudoscalar Partial Wave Analysis at GlueX

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Analysis of vector and axial vector meson systems will give insight into the light quark meson spectrum. Vector-pseudoscalar final states provide access to a rich set of intermediate states, including those mentioned above, but their analysis is complicated by the non-zero spin of the vector meson. A resonance amplitude model in the reflectivity basis is used to perform a partial wave analysis of several vector-pseudoscalar final states photoproduced at the GlueX experiment located at Jefferson Lab in Newport News, VA, USA. This talk will discuss the challenges of performing a partial wave analysis on a vector-pseudoscalar final state, with emphasis on the $\omega\pi$ channel. We will discuss the ongoing search for excited vector states in this and other vector-pseudoscalar channels, some of which are predicted to include gluonic excitation in their wavefunctions.

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