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Amplitude Analysis of the $\omega\pi^-$ System at GlueX[1] AMY SCHERTZ, William Mary, GLUEX COLLABORATION — Signals for mesons with exotic J^{PC} quantum numbers, which are not allowed for a quark-antiquark pair, have been experimentally observed, but their exact nature is still unknown. A candidate for these exotics is the hybrid meson, which consists of a quark, an antiquark, and an excited gluonic field configuration. GlueX, which is a large acceptance photoproduction experiment in Jefferson Lab's Hall D, aims to map the spectrum of light-quark mesons by studying a multitude of final states. The lightest expected exotic hybrid meson with $J^{PC} = 1^{-+}$ has been predicted to decay predominantly to $b_1\pi$, in a recent calculation by the HadSpec Collaboration. Thus, understanding the decay of the axial-vector b_1 meson is an important step in the search for exotics. In this talk, studies of the reaction $\gamma p \to \Delta^{++}\omega\pi^-$ at GlueX will be presented, with an emphasis on the amplitude analysis of the $\omega\pi^-$ final state, which is the dominant decay mode of the b_1^-.

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