

Abstract Submitted
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Coherent ω -Meson Photoproduction off Deuteron TAYA CHETRY, KENNETH HICKS, Ohio University, CLAS COLLABORATION — Coherent ω photoproduction from the deuteron has been studied using CLAS at Jefferson Lab, Virginia, as a function of the photon energy and the 4-momentum transfer. Tagged photons with beam energies between 0.8 and 3.6 GeV were produced using the bremsstrahlung process incident on a deuterium target, during the run period g10. The final state particles detected are an energetic deuteron and a pair of charged pions. These events were constrained to have neutral pion missing mass, to ensure an exclusive reaction where an ω -meson decays into a π^+ , a π^- and a π^0 . This study allows to test models of hadronic scattering of ω -mesons from the nucleon, as it is not possible to produce beams of ω -mesons. A preliminary differential cross section of the ω -meson in the coherent process is presented. In addition, this final state is useful to investigate a possible d^* dibaryon resonance that has been seen in other reaction channels at CLAS, as well as being seen earlier in partial-wave analysis of pion-deuteron scattering at a mass of about 2145 MeV.

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