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Beam Asymmetry for Photoproduced ω Mesons Off Bound Protons in Deuterons UTSAV SHRESTHA, University of Connecticut, OLGA CORTES BECERRA, The George Washington University — We extracted quasi-free $\vec{\gamma}d \rightarrow \omega p(n)$ photon beam asymmetry polarization observable from the photoproduction of ω mesons off the bound proton inside deuterium using a linearly polarized photon beam. The ω meson was identified through its charged decay $\omega \rightarrow \pi^+\pi^-\pi^0$ where the π^0 subsequently decays in two photons. The data were taken during the E06-103 (g_{13}) experiment with the CLAS detector in Hall B at the Thomas Jefferson National Accelerator Laboratory (JLab). This decay channel from photoproduction of ω mesons off the bound proton is of great interest in providing information about N^* resonances as ω is an isospin filter because ωN states can only be produced by N^* states with isospin $I = 1/2$ and not by Δ^* states with isospin $I = 3/2$. Furthermore, since its threshold is above the π and η photoproduction thresholds, the information obtained from the ω meson channel can give information of higher mass resonances (i.e., the region where the proton spectrum is less understood).

☒ Prefer Oral Session
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