

Abstract Submitted
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Beam asymmetry in η , η' , and ω meson photoproduction from the proton¹ PATRICK COLLINS, Catholic University of America — The CLAS g8b running period using linearly polarized photons on a proton target allowed for the extraction of beam asymmetry in η , η' , and ω meson photoproduction at photon energies up to 2.1 GeV. Our analysis aims for providing tight constraints on the coupling of baryon resonances to these channels. The excitation spectrum of the proton is comprised of many broad overlapping resonances. One excellent tool in helping understand the spectrum is η , η' , and ω meson photoproduction from the proton. Because these mesons have isospin 0, these channels can be seen as an “isospin filter” for the nucleon resonance spectrum. Differential cross section data has been the primary tool used to study these channels. There have been a comparatively smaller number of beam asymmetry measurements for η and ω , and none for η' . The new η and ω beam asymmetry data from CLAS have considerably finer binning in both energy and production angle and extend to higher E_γ . This data will provide better constraints for the presence of $N^*(I=\frac{1}{2})$ production in these channels, providing further insight into the nucleon excitation spectrum, where “missing” resonance states are of particular interest.

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