

Abstract Submitted
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Measurements of η and ω Photoproduction Beyond The Nucleon Resonance Regime¹ TIANQI HU, Florida State University, ZULKALIDA AKBAR², Florida State University(Former), VOLKER CREDE, Florida State University, THE CLAS COLLABORATION AT JEFFERSON LAB COLLABORATION — Measurements of light meson photoproduction are critical for understanding the underlying production mechanism in photon-nucleon interaction. At low energies, nucleon resonances have been extensively studied using techniques such as partial wave analysis. However, scarcities of cross section and polarization data over the photon energy range 3-6 GeV have thus far hindered our understanding of the transition from the nucleon resonance regime to t-channel Pomeron and Regge exchanges. In this talk, we will present recent measurements of η and ω meson differential cross sections, and ω meson spin density matrix elements(SDMEs) from close to the production thresholds up to the t-channel regime using the data collected at Jefferson Lab during the CLAS g12 run period. The circularly-polarized ω SDMEs have been measured for the first time. The production mechanism will be discussed in comparison with various models. The η and ω differential cross sections have been fairly well described by the η -MAID 2018 and Laget models, respectively. The flip-sign discrepancy of the ω SDME ρ_{1-1}^0 with the JPAC model implies the potential contribution of unnatural-parity exchanges is smaller than the previous model predicted.

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