Abstract Submitted
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Exclusive Pion Photoproduction from a Nucleon in the Wide Angle Regime ARUN TADEPALLI, Jefferson Lab, JOHN ARRINGTON, Argonne National Lab, ANDREW PUCKETT, University of Connecticut, BOGDAN WOJTSEKHOWSKI, Jefferson Lab, WAPP COLLABORATION — The measured differential cross sections for the single neutral/charge pion photoproduction from a nucleon in the wide angle regime (s,-t,-u much larger hadronic scale) disagree with theoretical calculations by **almost two orders of magnitude** in spite of many years of investigation. A solution was proposed by P. Kroll and K. Passek-Kumericki, whose GPD-based theory includes both twist-2 and twist-3 amplitudes. The signatures of the twist-3 amplitude (compared to twist-2) is a increase in the cross section and has opposite signs of the double polarization observables K_{LL} and A_{LL} at backward production angles. An experimental check of the prediction would provide valuable information on the validity of the handbag mechanism in the GPD framework in the accessible energy range. The proposed experiment will measure K_{LL}. It will be performed in Hall A at Jefferson Lab. The experiment will use the 6.6 GeV CEBAF electron beam to impinge photons in the energy range $E_\gamma \geq 4.0$ GeV on a deuterium target. Overview and projected results will be presented in this talk.

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