

Abstract Submitted
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Measurement of generalized form factors near the pion threshold in high Q^2 region with CLAS KIJUN PARK, Jefferson Lab, CLAS COLLABORATION — The recent development of experimental techniques allow us to study threshold pion production in high-energy experiments and particularly, electro-production with photon virtuality Q^2 in a few GeV^2 range. The experiments with fine energy resolution make a major step to come close to the production threshold to suppress the P-wave contribution (M_{1+}). The recent prediction based on the Light-Cone Sum Rule (LCSR), one can calculate the hadron form factors in terms of distribution amplitudes that approach perturbative Quantum Chromo-Dynamics (pQCD) without other non-perturbative parameters in high energy regime. The extraction of the generalized form factors near the pion threshold are estimated by the S- wave multipole dominance in the LCSR framework. We extracted the generalized form factors for the first time in the exclusive channel ($ep \rightarrow en\pi^+$) using CEBAF Large Acceptance Spectrometer (CLAS) at Jefferson Lab. The kinematic ranges are from 2.05 GeV^2 to 4.5 GeV^2 for Q^2 and 1.11 GeV to 1.15 GeV for the invariant mass range in the $n\pi^+$ system.. Preliminary results will be presented and compared with the calculation from LCSR, MAID and multipole analysis.

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