

Abstract Submitted  
for the DNP07 Meeting of  
The American Physical Society

**Dynamical Coupled-channel analysis of pion electroproduction data in the  $W \leq 2$  GeV resonance region**<sup>1</sup> L.C. SMITH, EBAC@JLab., University of Virginia, B. JULIA-DIAZ, EBAC@JLab, University of Barcelona, T.-S. H. LEE, EBAC@JLab, Argonne National Lab., A. MATSUYAMA, EBAC@JLab, Shizuoka University, T. SATO, EBAC@JLab, Osaka University — Within a dynamical coupled-channel model developed recently at EBAC, we have analyzed single pion electroproduction data from CLAS. The channels included are  $\gamma N$ ,  $\pi N$ ,  $\eta N$  and  $\pi\pi N$  which has  $\pi\Delta$ ,  $\rho N$ , and  $\sigma N$  resonant components. The hadronic parameters of the model have been determined from fitting the  $\pi N$  scattering data up to  $W = 2$  GeV. The determined  $\gamma^* N \rightarrow N^*$  form factors for all low-lying  $N^*$  states will be presented. The relations with the analysis based on the unitary isobar models will be discussed.

<sup>1</sup>Supported by DOE, Office of Nuclear Physics, No.DE-AC02-06CH11357, DE-AC05-06OR23177, DE-FG02-96ER40950, European HPP RII3-CT-2004-506078, a Grant-in-Aid for MEXT of Japan No. 18042003.

Tsung-Shung H Lee  
Argonne National Laboratory

Date submitted: 27 Jun 2007

Electronic form version 1.4