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Nucleon resonance electrocouplings from the CLAS data on charged double pion electroproduction. VICTOR MOKEEV, Jefferson Lab, CLAS COLLABORATION — Measurements of charged double pion (2π) electroproduction off protons with CLAS [1-3] provided the most extensive experimental data set of nine 1-fold differential cross sections. Phenomenological analysis of these data was carried out within the framework of model [4] in the kinematic range: 1.3 $< W <$ 1.8 GeV and 0.25 $< Q^2 <$ 1.5 GeV^2. A successful description of all observables was achieved, allowing us to establish all essential contributing mechanisms, consisting of various meson-baryon isobar channels, direct 2π production, and to isolate the resonant parts of the cross sections. For the first time electrocouplings of the $P_{11}(1440)$ and $D_{13}(1520)$ states were obtained in studies of 2π electroproduction. Good agreement with the previous results [5] obtained from studies of $\pi^+ n$ and $\pi^0 p$ electroproduction channels show that these electrocouplings can be evaluated reliably. The CLAS 2π data allowed us to determine electrocouplings for several high lying N^* states (M $>$ 1.65 GeV), that have major hadronic decays with 2π emission. The information on amplitudes of contributing non-resonant mechanisms will be used in future N^* studies in a global multi-channel analysis under development at EBAC [6]. [1] M. Ripani et al., Phys. Rev. Lett. **91**, 022002 (2003). [2] G. V. Fedotov et al., (CLAS Collaboration), arXiv:0809.1562 [nucl-ex] accepted by Phys. Rev. C. [3] http://clasweb.jlab.org/physicsdb/ (CLAS Physics Data Base). [4] V. I. Mokeev et al., arXiv: 0809.4158[hep-ph]. [5] I.G.Aznauryan, et. al., Phys. Rev.,C71, 015201 (2005). [6] A.Matsuyama, et. al., Phys.Rep., 439, 193 (2007); B.Julia-Diaz, et.al., Phys. Rev., C76, 065201 (2007).

Victor Mokeev
Jefferson Lab

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