Abstract Submitted
for the APR13 Meeting of
The American Physical Society

$\pi^+\pi^- p$ Electroproduction Cross Sections off Protons in the Second Resonance Region GLEB FEDOTOV, RALF GOTHE, University of South Carolina, VICTOR MOKEEV, Jefferson Lab, CLAS COLLABORATION — In this talk we present preliminary $\pi^+\pi^- p$ electroproduction cross sections off protons in the kinematical area of W from 1.4 to 1.8 GeV and Q^2 from 0.4 to 1.1 GeV^2. Our kinematical coverage in part overlap with previous CLAS measurements, but offers more than a factor six finer binning in Q^2. The physics analysis of these data within the framework of the JM model will allow us to determine the electrocouplings and the partial $\pi\Delta$, ρp decay widths of several high lying nucleon resonances $S_{31}(1620)$, $S_{11}(1650)$, $F_{15}(1685)$, $D_{33}(1700)$, $P_{13}(1720)$ and to further explore the evidence for the $3/2^+(1720)$ candidate-state. Analysis of the single pion electroproduction data measured with CLAS in the aforementioned kinematic region is in progress. Single and charged double pion exclusive channels are major contributors to the meson electroproduction in the N* excitation region with different non-resonant mechanisms. A successful description of all observables in these exclusive channels with consistent N* electrocouplings will offer evidence for the reliable evaluation of these fundamental quantities.

Gleb Fedotov
University of South Carolina

Date submitted: 10 Jan 2013 Electronic form version 1.4