

Abstract Submitted  
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**A Measurement of  $F_2$  and  $R = \sigma_L/\sigma_T$  on Nuclear targets in the Nucleon Resonance Region**<sup>1</sup> VAHE MAMYAN, University of Virginia — Jefferson Lab Experiment E04-001 used the Rosenbluth technique to measure  $R = \sigma_L/\sigma_T$  and  $F_2$  on deuterium and nuclear targets. This experiment was part of a multilab effort[1] to investigate quark-hadron duality and the electromagnetic and weak structure of the nuclei in the resonance region. In addition to the studies of quark-hadron duality in electron scattering on nuclear targets, these data will be used as input form factors in future analysis of neutrino data which investigate quark-hadron duality of the nucleon and nuclear axial structure functions. An important goal of this experiment is to provide precise data which to allow a reduction in uncertainties in neutrino oscillation parameters for neutrino oscillation experiments (K2K, MINOS). This inclusive experiment was completed in July 2007 at Jefferson Lab where the Hall C High Momentum Spectrometer detected the scattered electron. Measurements were done in the nuclear resonance region ( $1 < W^2 < 4GeV^2$ ) spanning the four-momentum transfer range  $0.5 < Q^2 < 4.0(GeV^2)$ . Data was collected from four nuclear targets: C, Al, Fe and Cu. After a brief presentation of the motivation of the experiment and its experimental and analysis details, the preliminary results will be presented. [1] Fermilab Minerva Experiment[<http://minerva.fnal.gov/>]

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