

2004 Annual Review Report

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Abstract

For my Ph. D. research, I have been working with the Polarized ^3He target group at Jefferson Lab. The experiment that I am working on, E97-110, studies the generalized Gerasimov-Drell-Hearn (GDH) sum rule for ^3He and the neutron at low Q^2 . From the measured asymmetries and cross sections we will study the ^3He and neutron spin structure. During the experiment, we used one of the Hall A spectrometers with an additional septum magnet, which enabled us to detect scattered electrons at angles of 6° and 9° . My responsibilities for the analysis include the optics data base optimization, the spectrometer acceptance study, the NMR polarimetry, and the production data. Over the past year, I have concentrated on the database optimization, which has been completed for both the 6° and 9° data sets over the entire momentum range and have worked on the NMR analysis for experiment E01-012, Spin-Duality. Currently I am starting to work on the acceptance study and will then move onto the physics analysis. I am planning to defend my dissertation in late 2005 or early 2006.