

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 (JLab). The experiment that I am working on, E97-110, will study the generalized Gerasimov-Drell-Hearn (GDH) sum rule for the neutron at low Q^2 . The measured quantities from the experiment will allow us to study the ^3He and the neutron spin structure. During the experiment, we will use the right Hall A spectrometer with an additional septum magnet that will allow us to achieve scattering angles of 6° and 9° . In anticipation for this experiment, I have been preparing and studying the behavior of the polarized ^3He target system. I also have been taking shifts on other Hall A experiments to become better acquainted with the detectors and data acquisition in Hall A. In the next 2-6 months, I will aid with installation of the ^3He system in Hall A and the commissioning of the septum magnet. The running period for E97-110 will be early next year. After the experiment, I will work on data analysis and begin to write my thesis.