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Measuring the Spin Structure of  ${}^{3}He$  and the Neutron at Low  $Q^{2}$  TIMOTHY HOLMSTROM, College of William and Mary, JEFFERSON LAB HALL A COLLABORATION, E97-110 COLLABORATION — The spin structure of the nucleon has been of great interest over the past few decades. Sum rules, including the Gerasimov-Drell-Hearn (GDH), and moments of the nucleon spin structure functions are powerful tools for understanding nucleon structure. The goal of Jefferson Lab experiment E97-110 is to perform a precise measurement of the  $Q^{2}$  dependence of the generalized GDH integral, an extension to finite  $Q^{2}$  of the GDH sum rule, and the moments of the  ${}^{3}He$  and neutron spin structure functions between 0.02 and 0.3  $(GeV/c)^{2}$ . This  $Q^{2}$  range will allow us to test the dynamics of Chiral Perturbation Theory, extrapolate to the real photon point for  ${}^{3}He$  and the neutron, and will complement a previous experiment at higher  $Q^{2}$ . The measurement will also contribute to the understanding of nucleon resonances. The acquisition of data has been completed. Status and prospects will be discussed.

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