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**A Measurement of the Proton Spin Dependent Structure Function, $g_2$, at Low $Q^2$** TOBY BADMAN, Univ of New Hampshire, G2P COLLABORATION — Over the past several decades Jefferson Lab has proven to be extremely successful in its endeavor to study the polarized structure of nucleons. Measurements of these nucleon structure functions have proven to be powerful tools in testing and understanding a number of effective theories of QCD. The neutron spin structure functions, $g^n_{1,2}$, and the proton spin structure function, $g^p_1$, have been measured to very high precision over a wide kinematic range. However, the second proton structure function, $g^p_2$, remains largely unmeasured. The primary goal of Jefferson Lab Hall A experiment E08-027 was to perform an inclusive measurement of the proton $g_2$ structure function for the first time in the low momentum transfer range of $0.02 < Q^2 < 0.2$ GeV$^2$. The experiment will allow us to test the Burkhardt-Cottingham Sum Rule at low $Q^2$ as well as extract the longitudinal-transverse generalized spin polarizability and compare it to predictions from Chiral Perturbation Theory. The experiment acquired data at Jefferson Lab in Hall A during March - May of 2012. The details of the experiment and preliminary results will be presented.

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