NEUTRON SPIN STRUCTURE IN THE RESONANCE REGION AND QUARK-HADRON DUALITY.

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The recent data of the spin independent structure functions measured in the resonance region have confirmed Bloom-Gilman (quark-hadron) duality. The aim of experiment E01-012 is to provide a precision extraction of the neutron spin structure function g_1^n and the virtual photon asymmetry A_1^n in the resonance region up to $Q^2 = 4(\mathrm{GeV/c})^2$ in order to test quark-hadron duality predictions. The experiment E01-012 ran successfully in Jefferson Lab Hall A in January-February 2003 and used the polarized ^{3}He target combined with the Jefferson Lab high polarization continuous electron beam. Quark-hadron duality, if observed, can be a powerful tool to study the high x behavior of nucleon spin structure functions.