

Search for Higher Twist Effects in the Spin Structure Function $g_2^n(x, Q^2)$

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Jefferson Lab experiment E97-103 measured the spin structure function $g_2^n(x, Q^2)$ from a Q^2 of 0.58 to 1.36 with a nearly constant x of 0.2. Combining this data with a fit to the world g_1^n data, the size of higher twist contributions to the spin structure functions can be extracted using the Wandzura-Wilczek relation. These higher twist contributions result from quark-gluon correlations and are expected to be larger as Q^2 decreases. This experiment was performed in Hall A with a longitudinally polarized electron beam and high density polarized ^3He target. The physics motivation and an overview of the experiment will be presented.