

Abstract Submitted
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Report on the Spin Asymmetries of the Nucleon Experiment¹

WHITNEY ARMSTRONG, Temple University, SANE COLLABORATION — The Spin Asymmetries of the Nucleon Experiment (SANE) measured the proton spin structure function g_2 in a range of Bjorken x , $0.3 < x < 0.8$, where extraction of the matrix element d_2^p (an integral of g_2 weighted by x^2) is most sensitive. The data was taken from Q^2 equal to 2.5GeV^2 up to 6.5GeV^2 . In this polarized electron scattering off a polarized hydrogen target experiment, two double spin asymmetries, A_{\parallel} and A_{\perp} were measured using the BETA (Big Electron Telescope Array) detector. BETA consists of a scintillator hodoscope, gas Cherenkov, lucite hodoscope and a large array of lead glass detectors. With a unique open geometry, a threshold gas Cherenkov detector allowed BETA to cleanly identify electrons for this inclusive experiment. We will discuss the performance of BETA with an emphasis on the gas Cherenkov and present the current status of experimental analysis.

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