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Spectrometer Optics Calibration for Jefferson Lab g_2^p Experiment CHAO GU, University of Virginia, JEFFERSON LAB HALL A E08-027 COLLABORATION — The proton spin-dependent structure function g_2^p in the resonance region has been measured in a recent experiment at Jefferson Lab's Hall A. The goal of this experiment is to determine the g_2^p structure function in the Q^2 region of 0.02-0.20 GeV^2 by using a transversely polarized NH_3 target. The Hall A High Resolution Spectrometers (HRS) were used to provide an inclusive measurement of scattered electrons at 5.69°. A pair of septum magnets were used to bend the 5.69° scatted electrons into the 12.5° spectrometers. A full optics calibration of the spectrometer is required to extract the kinematic quantities at the interaction vertex. However, the calibration procedure is challenging due to the complications from the strong transverse target field (2.5 T and 5.0 T) and the varied field configurations of the septum magnets. The details of the optics calibration and the progress will be described in this talk.

Chao Gu
University of Virginia

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