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Measurement of Single-spin Asymmetry in Charged Kaon Electroproduction on a Transversely Polarized ^{3}He Target YOUCAI WANG, University of Illinois at Urbana-Champaign, JEFFERSON LAB E06-010 COLLABORATION — Data on target single-spin asymmetry in the semi-inclusive deep inelastic $\vec{n}(e, e'K^{\pm})X$ reaction have been taken in Hall A at Jefferson Lab using a transversely polarized ^{3}He target and an electron beam of 5.9 GeV. This measurement covers the kinematic region, $x = 0.13 \sim 0.41$, at $Q^2 = 1.3 \sim 3.1$ (GeV/c)^2. In coincidence with the scattered electrons detected in the large-acceptance BigBite spectrometer, kaons were detected in the high-resolution spectrometer and identified using an aerogel and Ring-Imaging Cherenkov (RICH) detectors together with time-of-flight (TOF) information. The kaon and pion single-spin asymmetry data from this experiment are expected to provide constraints on the flavor dependence of the transversity and the Sivers distribution functions. The performance of the aerogel, TOF, and RICH for kaon identification, as well as some preliminary results of the analysis, will be presented.

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