

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

New Prospects for Transverse Physics with the PHENIX detector MICKEY CHIU, University of Illinois at Urbana-Champaign, PHENIX COLLABORATION — PHENIX has made measurements of the transverse single spin asymmetry A_N for pi-zero and non-identified charged hadrons near $x_F \sim 0$ at collider energies, and measurements of pi-zero A_N and pi+/pi- have also been made at the same \sqrt{s} but at x_F up to 0.6 by the STAR and Brahm's collaborations. Asymmetries as large as $\sim 30\%$ have been found. Currently, these large asymmetries are thought to come either from higher-twist contributions, modifications to the parton distribution functions (Sivers), modifications to the fragmentation functions (Collins), or even perhaps some combination of the three. Future progress will require separating these effects. We discuss future prospects with the PHENIX detector for reducing these ambiguities in inclusive single spin asymmetries by looking at correlations between hadrons from the same and from back to back jets.

Mickey Chiu
University of Illinois at Urbana-Champaign

Date submitted: 26 May 2005

Electronic form version 1.4