Neutral pion single transverse spin asymmetries with the PHENIX experiment

JOHN KOSTER, University of Illinois - Urbana Champaign — The PHENIX experiment at RHIC probes the proton’s transverse spin structure by measuring single spin asymmetries, $A_N$, for inclusive hadron production in proton-proton collisions with transverse proton beam polarization. Single spin asymmetries in $p + p$ arise from combinations of Sivers-like and Collins-like effects. Measurements of a large range of the relevant kinematic variables, $x_F$, $p_T$, will help to clarify the origin of the observed large single spin asymmetries. In PHENIX, the asymmetry, $A_N$ for neutral pions can be measured both at central and at forward rapidity using the large 2008 data set. In this paper we report the status of the single spin asymmetry analysis for inclusive hadrons in PHENIX.