Abstract Submitted
for the APR10 Meeting of
The American Physical Society

The Measurement of Transverse Single Spin Asymmetry of Forward Charged Hadrons in the PHENIX experiment at RHIC FENG WEI, Iowa State University — The measurement of transverse single spin asymmetries provides an opportunity to probe the parton structure of transversely polarized nucleons. We present PHENIX preliminary results of transverse single spin asymmetries of non-identified charged hadrons measured in the muon spectrometers ($1.2 < \eta < 2.5$) from transversely polarized p+p collisions at $\sqrt{s} = 200$GeV as a function of x_F and p_T. PHENIX has lower x_F and higher p_T coverage than the Brahms experiment, which has made these measurements in the past. At lower x_F we can study the turn-on of the asymmetry as a function of x_F, and the crossover region between pQCD and TMD factorization is at higher p_T. Perturbative QCD predicts that the asymmetry should decrease as $1/p_T$. For this purpose we also show the p_T dependent asymmetry in a very narrow x_F range around the turn-on region.

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Date submitted: 22 Oct 2009 Electronic form version 1.4