

Abstract Submitted  
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**The Measurement of Transverse Single Spin Asymmetry of Forward Charged Hadrons in the PHENIX experiment at RHIC** FENG WEI

— 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  $\sqrt{s} = 200\text{GeV}$  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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