

Abstract Submitted
for the APR05 Meeting of
The American Physical Society

Heavy flavor production in p+p collisions at $\sqrt{s} = 200$ GeV
SERGEY BUTSYK, SUNY at Stony Brook, PHENIX COLLABORATION —
Heavy flavor particles carrying charm or beauty quarks play an important role in understanding the physics of high energy hadronic collisions. Measurement of heavy flavor production in p+p collisions at $\sqrt{s} = 200$ GeV not only provides an important baseline for studying potential nuclear modifications of heavy flavor production in nucleus-nucleus collisions but also tests the applicability of perturbative QCD theory. The unique electron identification capabilities of the PHENIX detector at RHIC allow to measure semi-leptonic decays of heavy flavor particles. Using p+p data collected in the 2001 run, we have measured single electron inclusive p_T distributions. The contribution from heavy flavor decays can be extracted by two independent methods. The “Converter” method uses a special data set where the photonic component of the inclusive electron spectrum is enhanced by adding a photon converter to the standard experimental setup. In the “Cocktail” method the contributions from Dalitz decays, other light hadron decays, and photon conversions are calculated and subtracted from the inclusive electron spectrum. The final results will be presented.

Sergey Butsyk
SUNY at Stony Brook

Date submitted: 14 Jan 2005

Electronic form version 1.4