

Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Heavy quark production at forward and backward rapidity in d+Au collisions at $\sqrt{s} = 200$ GeV SANGHOON LIM, Yonsei University, PHENIX COLLABORATION — Heavy quarks produced in the early stage of heavy ion collisions are very effective probes of dense partonic medium produced at RHIC. PHENIX has an ability to access this information by measuring single electrons in central arm spectrometers ($|\eta| < 0.35$) and single muons in forward (backward) muon spectrometers ($1.4 < |\eta| < 2.0$). The measurement of heavy quark production at forward (backward) rapidity from d+Au data is crucial for the determination of initial state Cold Nuclear Matter effects in heavy ion collisions. The PHENIX result of single electrons decaying from heavy flavor at mid-rapidity has shown a strong Cronin enhancement in the central d+Au collisions. Heavy flavor measurements at forward (backward) rapidity are key measurements to access the low (high) x parton distributions within the Au nucleus. During the data-taking period in 2008, PHENIX collected 30 times more d+Au collision data than in the previous 2003 run. The increased luminosity allows studies of the centrality dependence on heavy quark production over an extended kinematic range. In this talk, the measurement of single muons decaying from open heavy flavor quarks at forward and backward rapidity from the 2008 RHIC d+Au Run will be presented.

Sanghoon Lim
Yonsei University

Date submitted: 15 Jan 2013

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