

Abstract Submitted  
for the HAW05 Meeting of  
The American Physical Society

**Heavy flavor production from single muons in Au+Au collisions at  $\sqrt{s_{NN}} = 200$  GeV** ANUJ PURWAR, Los Alamos National Lab, PHENIX COLLABORATION — Heavy flavor production in the dense partonic matter created at RHIC can be modified either by energy loss for heavy quarks or by charm enhancement. Measurement of open charm as a function of centrality will also be critical to interpreting the measured production of  $J/\psi$  in Au+Au collisions, as  $J/\psi$  production is predicted to be modified by both initial state and final state effects in Au+Au collisions. One way of measuring open charm is to look at single muons from semi-leptonic decays. The PHENIX experiment at RHIC is uniquely positioned to make this measurement using its two muon arms. Single muons from Au+Au collisions have to be extracted from a background of hadron punch throughs and muon decays from light mesons. We present the latest results of open charm from Au+Au collisions using the PHENIX muon arms (pseudorapidity range:  $1.2 < |\eta| < 2.4$ ).

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Date submitted: 24 May 2005

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