Abstract Submitted
for the APR13 Meeting of
The American Physical Society

Open heavy flavor production in Cu+Au collisions at forward rapidity at $\sqrt{s_{NN}} = 200GeV$ IRAKLI GARISHVILI, Lawrence Livermore National Laboratory, SANGHOON LIN, Yonsei University, PHENIX COLLABORATION — Open heavy flavor production is an important probe of the strongly interacting matter created during the early stages of heavy ion collisions. Single muons are used to tag the production of heavy quarks via semileptonic decays of D and B mesons. With its Muon arms, the PHENIX detector at RHIC is optimized to measure muon production from different sources at forward and backward rapidities over the range of $1.2 > |\eta| < 2.2$. PHENIX has already measured the production single muons from open heavy flavor meson decays for several collision systems (Cu+Cu, d+Au and p+p) at $\sqrt{s_{NN}} = 200GeV$. These data indicate that the production of heavy quarks and their subsequent interactions with the medium in forward rapidity kinematic region are strongly modified by both hot and cold nuclear matter effects. In Summer 2012 PHENIX collected large dataset on Cu+Au collisions at $\sqrt{s_{NN}} = 200GeV$, which is the first RHIC data dedicated to colliding two asymmetric heavy ions beams. Studying collisions of asymmetric heavy ions can be crucial in understanding the geometry dependence of initial and final state effects. The status of the first measurement in Cu+Au collisions at $\sqrt{s_{NN}} = 200GeV$ will be presented.

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Date submitted: 15 Jan 2013 Electronic form version 1.4