Abstract Submitted
for the HAW14 Meeting of
The American Physical Society

Measurement of charm and bottom quarks medium modification in $\sqrt{s_{NN}}$=200 GeV Cu+Au collisions at RHIC CESAR DA SILVA, Los Alamos Natl Lab, PHENIX COLLABORATION — The PHENIX detector at RHIC collected a large sample of Cu+Au collisions at $\sqrt{s_{NN}}$=200 GeV using a new Forward Vertex Detector (FVTX) which covers the rapidity range $1.2 < |y| < 2.2$. With FVTX we can statistically separate charm and bottom quark yields by measuring the displaced vertex of muons. The measurement is done in the Cu going $(1.2 < y < 2.2)$ and Au going $(-2.2 < y < -1.2)$ directions. The rapidity dependence of the heavy quark yields can reveal if initial state effects measured in p+A collisions factorize with quark-gluon plasma effects in A+A. FVTX can also cover a relatively small transverse momentum of heavy quark made mesons, where the mass of the heavy quarks really matters to distinguish the scenario of the parton energy loss in the hot and dense medium expected to be formed in heavy ion collisions. This talk will detail the physics case and the status of the analysis.

Cesar Da Silva
Los Alamos Natl Lab

Date submitted: 01 Jul 2014 Electronic form version 1.4