Abstract Submitted
for the APR21 Meeting of
The American Physical Society

Analysis Status of The Measurement of Charm and Bottom Production in PHENIX[1] ZHIYAN WANG[2], Brookhaven National Laboratory, PHENIX COLLABORATION[3] — It has long been observed experimentally, from previous heavy-flavor electron measurements, that heavy quarks are subject to substantial modifications of their momentum spectrum. The PHENIX Collaboration at the Relativistic Heavy Ion Collider (RHIC) has measured open heavy-flavor production in minimum bias p+p and Au+Au collisions at $\sqrt{S_{NN}} = 200$ GeV, by measuring the different decay lengths using a silicon vertex detector. The comparisons between Au+Au and p+p collisions shed light on properties of hot nuclear matter, as well as quark-gluon plasma's influence on the heavy-flavor electron's nuclear modification factor R_{AA}. In our analysis, p+Au collisions at $\sqrt{S_{NN}} = 200$ GeV are studied, and provide another contributing factor to heavy-ion collision as the cold nuclear matter baseline. The status of the analysis will be presented including data quality assurance, recalibration and electron identification, production of inclusive electrons' DCA distribution measured by VTX, as well as simulation of the DCA distributions of electron backgrounds.

[1]Supported by DOE award DE-SC0007017
[2]Ph.D candidate at CUNY Baruch/Grad Center
[3]Brookhaven National Laboratory

Zhiyan Wang
Brookhaven National Laboratory

Date submitted: 08 Jan 2021 Electronic form version 1.4