

Abstract Submitted
for the DNP19 Meeting of
The American Physical Society

Study of the semileptonic decay of D^- and B^- -mesons into muons at $\sqrt{s_{NN}} = 200$ GeV with the PHENIX detector AJEETA KHATIWADA, CESAR DA SILVA, XUAN LI, Los Alamos National Laboratory, PHENIX COLLABORATION — We study yields of muons from the semileptonic decay of D^- and B^- -mesons at $\sqrt{s_{NN}} = 200$ GeV with the data collected by the PHENIX experiment at RHIC. D^- and B^- -mesons are expected to leave signatures of displaced vertices in the tracking detectors that can be used to measure the relative contribution from charm and bottom hadrons to the muons in the Au+Au collision. Using p+p as control, this measurement will be carried out in the forward rapidity region, exploiting the excellent precision of event vertex and decay muons trajectories provided by the forward silicon-vertex detector and the central silicon-vertex detector. The measured cross section will probe c^- and b^- -quark yields in the quark-gluon plasma (QGP), give handle on the heavy quark energy loss in the QGP medium, and advance our understanding of the roles played by initial-state effects. In this talk, current status of the analysis and the techniques applied will be presented.

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Date submitted: 01 Jul 2019

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