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PHENIX measurements of elliptic flow of inclusive open heavy flavor mesons at forward rapidity in 200 GeV Au+Au collisions

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Near perfect fluid behavior is a hallmark signature of the quark gluon plasma (QGP), however, how this behavior emerges is still not fully understood. Thus, measurements of many different particles over a wide rapidity range are needed to understand this phenomenon. Heavy quark flow is expected to be different from light quark flow due to their larger masses, making heavy flavor flow measurements particularly important for understanding QGP behavior. The flow of heavy flavor particles can be measured via their decay muons in forward and backward rapidity using PHENIX's muon spectrometers ($1.2 < |\eta| < 2.2$). Additionally, PHENIX has unique capabilities for measuring the radial distance of closest approach (DCA_r) using the forward silicon vertex detector (FVTX), which allows for improved background subtraction from the heavy flavor signal, making it the only RHIC detector capable of performing this measurement at forward and backward rapidities. We will present the status of elliptic flow measurements of the inclusive heavy flavor decayed muons in the 0-7 GeV/c transverse momentum range using the Run14 Au+Au 200 GeV dataset (roughly 16 billion events). Preliminary results for charged hadron and inclusive muon elliptic flow will also be presented.

Author: Mr BLANKENSHIP, Brandon (PHENIX Collaboration)

Presenter: Mr BLANKENSHIP, Brandon (PHENIX Collaboration)

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