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Event anisotropy of electrons from charm and bottom quark decays in 200 GeV Au+Au collisions at RHIC-PHENIX

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The production of heavy quarks is a powerful tool for investigating the dense partonic medium created in high energy heavy ion collisions. Due to their large masses, heavy quarks are mainly produced at the initial stage of the collisions.

Therefore the heavy quark probes is sensitive to the full time evolution of the heavy ion collision.

The PHENIX experiment measured the strong flow (v_2) of electrons from heavy quark decays. This indicates that the heavy quarks interacts with the medium more than it had been expected.

However these measurements could not distinguish between charm and bottom decays, measuring instead an admixture of the two.

We installed the silicon vertex tracker (VTX) in year 2011 as a detector upgrade. The VTX was designed to provide a clear separation of the charm and bottom contributions by measuring electrons with the distance of the closest approach to the primary vertex.

In this poster, the analysis method will be described in detail and the status of electron flow from separated charms and bottoms in Au+Au 200GeV collisions at RHIC-PHENIX will be presented and discussed.

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