

Abstract Submitted
for the DNP12 Meeting of
The American Physical Society

Studies of Displaced Vertex Distributions using the new FVTX Tracker in PHENIX JEONGSU BOK, New Mexico State University, PHENIX COLLABORATION — The principal motivation for the Forward Vertex (FVTX) upgrade to the PHENIX detector at RHIC is the observation of displaced vertices due to the weak decay of heavy mesons (D and B for example). These mesons travel approximately 1 mm before decaying, and so the decay products appear to come from a different location than the primary event vertex. The distributions of the “distance of closest approach” (DCA) for decay tracks from short-lived heavy-flavor mesons and long-lived ordinary mesons (K and π^\pm) computed with respect to the primary vertex are sufficiently different to allow for significant background rejection and enhancement to the signal/noise ratio in our sample of heavy-flavor tagged events. We present a simulation of these DCA distributions and also compare to the first FVTX data collected in the RHIC 2012 run.

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Date submitted: 02 Jul 2012

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