

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

The azimuthal anisotropy of electrons from heavy flavor decays in $\sqrt{s_{NN}} = 200$ GeV Au-Au collisions by PHENIX SHINGO SAKAI, University of Tsukuba, PHENIX COLLABORATION — The azimuthal anisotropy of particle emissions is a powerful tool to study the early stage of ultra-relativistic nuclear collisions. Previous measurements of v_2 for hadrons made of light quarks, such as pions and kaons, are consistent with the quark coalescence model, which assumes that hadrons derive their v_2 from the quarks that form them. This suggests that the v_2 already develops in the partonic phase for hadrons made of light quarks. In addition if the v_2 of heavy flavor is non-zero, it would suggest partonic level thermalization and very high density at the early stage of the collisions. In this presentation, we will show the azimuthal anisotropy of heavy flavor by measuring the electron v_2 from semi-leptonic charm decays in Au+Au collisions at $\sqrt{s_{NN}} = 200$ GeV in RHIC-RUN4 and compare with several theoretical predictions.

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Date submitted: 26 May 2005

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