

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Measurement of Non-photonic Electron Anisotropic Flow in $\sqrt{s_{NN}}=200$ GeV Au+Au Collisions ANDREW ROSE, Lawrence Berkeley National Laboratory, STAR COLLABORATION — In order to understand the partonic EOS of matter created at RHIC, one needs to study both the collectivity of the produced matter and the degree of thermalization. Anisotropic flow measurements have already demonstrated the development of partonic collectivity at RHIC [1]. The next step is to address the issue of thermalization. Since the masses of the heavy flavor quarks are much larger than the possible excitation of the system created in the collision, their collective motion could be used to indicate the thermalization of light flavors (u-,d-, s- quark hadrons). It has been shown that the information of charm hadron flow can be extracted from their semi-leptonic decay in the region $p_T > 2\text{GeV}/c$ [2]. In this talk, we report the STAR preliminary results of non-photonic electron v_2 from 200GeV Au+Au collisions. The data is from the high statistics run IV at RHIC. Both STAR TPC and the TOF tray were used in the analysis to identify electrons. A systematic comparison of the electron v_2 with both hadronic v_2 results and theory predictions will be discussed. [1] Phys. Rev. Lett. 86 (2001) 402 [2] X. Dong et al., Phys. Lett. B(2004); Ko et al., PRC (2004)

Andrew Rose
Lawrence Berkeley National Laboratory

Date submitted: 25 May 2005

Electronic form version 1.4