

Abstract Submitted
for the HAW05 Meeting of
The American Physical Society

Methodology and Systematics for electron-hadron Correlations with the PHENIX Experiment at RHIC JENNIFER KLAY, Lawrence Livermore National Laboratory, PHENIX COLLABORATION — High p_T electron-hadron correlations offer a way to study heavy flavor production in the complicated environment of relativistic heavy ion collisions. Near angle correlations can result from the semi-leptonic decays of D and B mesons while the correlation of an electron with an opposite side hadron is sensitive to the back-to-back jet signature of hard-scattered c and b quarks. To extract information about particles containing c- and b-quarks requires corrections for detector systematics as well as detailed understanding of background correlations arising from the anisotropic source, photon conversions and other hadronic decays. This talk will focus on the techniques used to evaluate these contributions to the electron-hadron correlation signals measured by the PHENIX experiment in p+p, d+Au and Au+Au collisions at $\sqrt{s_{NN}}=200\text{GeV}$. Prospects for measuring e-h correlations with respect to the reaction plane will also be discussed.

Jennifer Klay
Lawrence Livermore National Laboratory

Date submitted: 25 May 2005

Electronic form version 1.4