Abstract Submitted
for the DNP13 Meeting of
The American Physical Society

Simulation studies of the sPHENIX calorimeters at RHIC[1] LIANG XUE, XIAOCHUN HE, Georgia State University — The study of jet quenching and di-hadron correlation provide key knowledge for the coupling of the quark gluon plasma (QGP), and the mechanism of rapid equilibration. During past three years, the current PHENIX collaboration has developed its decade's upgrade refer as sPHENIX. The sPHENIX will incorporate two new electromagnetic (EMCal) and hadronic (HCal) calorimeters with a large pseudo-rapidity range ($|\eta| < 1.$), and full azimuthal coverage, that will enable a systematic study of jets in QGP. In this talk, we present the results of single particle simulation with Geant 4 for the sPHENIX EMCal and HCal with planar and tilt plates geometries. The hadronic rejection power and the electron/hadron separation capability will also be presented.

[1]This work is done under the directions of the sPHENIX group in current PHENIX collaboration.

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Date submitted: 01 Jul 2013 Electronic form version 1.4