



Contribution ID: 435

Type: **Parallel contribution**

## Probing hot and dense nuclear matter with particle correlations and jets at RHIC

*Wednesday, 10 August 2011 14:00 (25 minutes)*

The high energy nucleus-nucleus collision at RHIC has produced the quark matter where quarks and gluons are believed to be deconfined. Single particle spectra has shown that parton lose significant amount of energy in such medium. It's therefore important to further explore the medium properties using multi-particle correlations and jets.

In this contribution, we present recent results from RHIC on the following related analyses. We will discuss the studies of the "ridge" and the away-side correlation structure in central A+A collisions via multi-particles correlations. Higher order Fourier harmonics extracted from di-hadron correlations in comparison with initial density fluctuation models will be presented. Comparative analysis of hadron correlations with a high-energy particle vs. fully reconstructed jets will also be discussed.

**Primary author:** Dr PEI, Hua (University of Illinois at Chicago)

**Presenter:** Dr PEI, Hua (University of Illinois at Chicago)

**Session Classification:** Heavy Ion Physics/Hot and Dense QCD

**Track Classification:** Heavy Ion Physics/Hot and Dense QCD