QUARK MATTER 2015
Sep. 27 – Oct. 3, 2015 Kobe, Japan

Contribution ID: **230** Type: **Poster**

Measurement of azimuthal anisotropy for high pT charged hadrons in Au+Au collisions at 200GeV at RHIC-PHENIX

Tuesday, 29 September 2015 16:30 (2 hours)

The azimuthal anisotropy on the particle emission is expected as a method to approach the characteristics of the deconfined quarks and gluons state (QGP) generation in the high-energy heavy-ions collisions. The azimuthal anisotropy is sensitive to the early stage and, is the observable that is affected by QGP properties. The behavior of anisotropy is consistent with the hydro-dynamical model for p_T lower than 2GeV/c, but not for higher p_T. When there is QGP, parton lose their energy (jet quenching) and its energy loss is related to the pass length in the dense matter. In non-central collisions, this jet quenching makes an azimuthal anisotropy in the high p_T region where the hard process is dominant. In this poster, we will present the status of detailed study for p_T and centrality dependence of the azimuthal anisotropy for high p_T (up to 8~10 GeV) charged hadrons in 200 GeV Au+Au collisions with RHIC-PHENIX. The relation of the pass length to the azimuthal anisotropy will be discussed.

On behalf of collaboration:

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Session Classification: Poster Session

Track Classification: Jets and High pT Hadrons