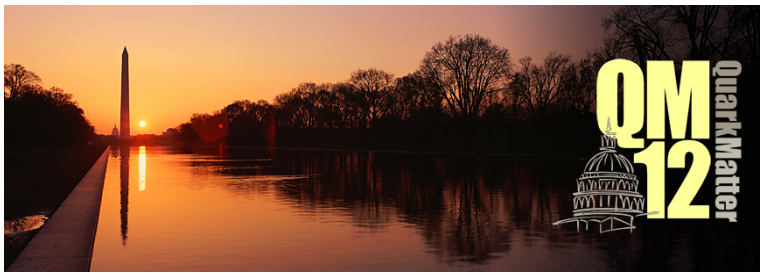

Contribution ID: **326** Type: **Poster**

Measurements of anisotropic flow(v_n, n=1,2,3,4) in Cu + Au collisions at 200 GeV from PHENIX

Thursday 16 August 2012 16:00 (2 hours)

Measurements of the anisotropic flow with different order harmonic coefficients (v_n, n=1,2,3,4) have played a pivotal role in the discovery of the strongly coupled quark-gluon plasma (sQGP) at RHIC. They are also important for the study of the viscous hydrodynamics and the extraction of the shear viscosity over entropy density (η/s). The anisotropic flow is strongly coupled with the medium density, initial geometry shape, and corresponding event-by-event fluctuation. All of these elements will come into play in a new way with the availability of Cu+Au collisions at RHIC.

The flexibility of RHIC to collide asymmetric nuclei such as Cu + Au at 200 GeV can provide an asymmetric geometry and density both in the transverse plane and longitude, and therefore open a window to investigate the influence from initial geometry and density. It will also help us to probe the different hydrodynamics models and collision models and their properties. In this poster, I will present the work in progress for measuring the correlation between the different v_n planes, from fast production data. Progress for the measurements of charged hadron v_n as a function of centrality, transverse momentum and rapidity will also be presented.

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Session Classification: Poster Session Reception

Track Classification: Global and collective dynamics