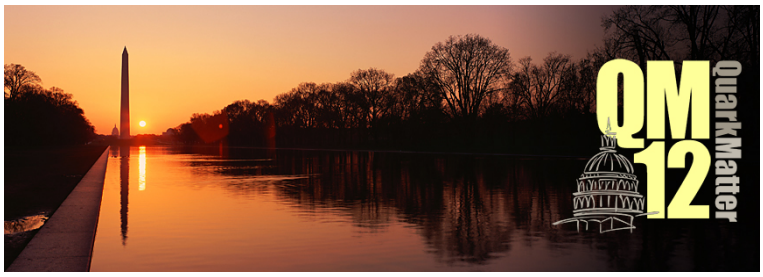

Contribution ID: **266** Type: **Oral Presentation**

Beam Energy Dependence of Strange Hadron Production from STAR at RHIC

Thursday 16 August 2012 15:00 (20 minutes)

Strange hadron production is sensitive to parton dynamics in nucleus-nucleus collisions. In particular, the strange quark production rate and its subsequent evolution in the dense partonic medium depend on the beam energy and the net baryon density. We will present STAR measurements of K_s^0, $K^{\pm}$, ϕ, Λ, Ξ, and Ω at mid-rapidity from Au+Au collisions at $\sqrt{s_{NN}}$ = 7.7, 11.5, 19.6, 27, and 39 GeV from the RHIC Beam Energy Scan (BES) program. We will report the strangeness enhancement through the ratios K/π, Λ/π, ϕ/π and Ξ/π, and strangeness equilibration as a function of beam energy at RHIC. Nuclear modification factors and baryon to meson ratios will be discussed to understand recombination and parton energy loss mechanisms. Further, the particle ratios will be compared to ultra relativistic quantum molecular dynamics, hadron string dynamics, statistical hadronization models and SPS measurements. Implications on partonic vs. hadronic dynamics at low beam energies will also be discussed.

Primary author: Dr ZHANG, Xiaoping (Tsinghua University)

Presenter: Dr ZHANG, Xiaoping (Tsinghua University)

Session Classification: Parallel 5A: Hadron Thermodynamics and Chemistry (Chair R. Stock)

Track Classification: Global and collective dynamics