

Abstract Submitted  
for the DNP11 Meeting of  
The American Physical Society

**Hadron Production and Freeze-Out Dynamics in  $\sqrt{s_{NN}}$  Au+Au at RHIC** SAMANTHA BROVKO, University of California, Davis, STAR COLLABORATION — The Beam Energy Scan (BES) program at RHIC was commissioned to search for the critical point and the turn-on of QGP signatures. STAR has collected data from collisions of  $Au + Au$  at energies from 7.7 to 62.4 GeV per nucleon pair. The addition of a full-coverage Time-of-Flight detector at STAR has extended the momentum range for clean particle identification. The freeze-out parameters can be extracted from the measured hadron spectra. In this talk, we will present STAR preliminary results of particle spectra from  $\sqrt{s_{NN}} = 19.6$  GeV  $Au + Au$  collisions. Distributions of  $\pi, K, p$  and  $\bar{p}$  as a function of  $m_T - m_0$  will be used to discuss the chemical and kinetic freeze-out properties. In addition, we will compare these results with earlier BES data from STAR.

Samantha Brovko  
University of California, Davis

Date submitted: 01 Jul 2011

Electronic form version 1.4