

Identified Particle Production in Au+Au Collisions at $\sqrt{s_{NN}} = 14.5$ GeV in STAR

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One of the main goals of relativistic heavy-ion collision experiments is to explore the QCD phase diagram and hence to search for the QCD critical point. The study of the bulk properties of the system formed in high-energy heavy-ion collisions shed light on the evolution of the system and on the particle production mechanism. Keeping this in view, the Beam-Energy Scan (BES) program took place in the years 2010 and 2011 at RHIC, where Au+Au collisions were recorded at $\sqrt{s_{NN}} = 7.7, 11.5, 19.6, 27, 39,$ and 62.4 GeV. In the year 2014, Au+Au collisions at $\sqrt{s_{NN}} = 14.5$ GeV were also recorded by the STAR experiment at RHIC under the same BES program. In this analysis we present the transverse momentum spectra of $\pi^\pm, K^\pm, p(\bar{p})$ in Au+Au collisions at $\sqrt{s_{NN}} = 14.5$ GeV. The bulk properties of the system, dN/dy , mean transverse momentum ($\langle p_T \rangle$), kinetic freeze-out and chemical freeze-out properties are also studied in detail. All the results are compared with other BES energies.

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