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Strange particle production in relativistic nuclear collisions

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One of the main goals of the relativistic nuclear collisions is to investigate the behavior of nuclear matter under extreme conditions of temperature and energy density. The transverse momentum distributions of identified hadrons contain information about the collective expansion of the system and constrain the freeze-out properties of the matter created in these collisions. It is often assumed that different particle species freeze-out from the fireball at different temperatures. A blast-wave analysis on the strange particle pT spectra obtained in Au+Au collisions at the Relativistic Heavy Ion Collider (RHIC) Beam Energy Scan (BES) energies will be presented. The dependence of the freeze-out parameters on collision energy and event centrality will be discussed. These results will be compared with the blast-wave results obtained from the non-strange particle pT spectra analysis.

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