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Beam Energy Dependence of Strange Hadron Production from STAR at RHIC

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Strange hadron production is believed to be 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 , Λ , Ξ , Ω at mid-rapidity from Au+Au collisions at the beam energies of 7.7, 11.5, 19.6, 27 and 39 GeV from the RHIC Beam Energy Scan (BES) program. We investigate the strangeness enhancement and ratios of anti-baryon to baryon yields as a function of beam energy at RHIC. Nuclear modification factors and ratios of baryon to meson yields will also be discussed. Implications on collision dynamics due to the increase in the baryon chemical potential at low beam energy and constraints on chemical freeze-out parameters will also be discussed.

Author: ZHAO, Feng (University of California, Los Angeles)

Presenter: ZHAO, Feng (University of California, Los Angeles)

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