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Strangeness Production in Fixed-Target Au+Au collisions at $\sqrt{s_{NN}} = 7.2$ GeV from STAR

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Strangeness production is considered a sensitive probe to the properties of the medium created in heavy-ion collisions. The RHIC Beam Energy Scan Program (BES) is designed to investigate the QCD phase diagram and search for a potential QCD critical point. The BES-program covers a wide energy range from $\sqrt{s_{NN}} = 3$ to 54.4 GeV. Of particular interest is the high baryon density region which can be explored through production of strange hadrons (K_s^0 , Λ) at lower energies from the fixed target program. Such studies can also help understand their production mechanism in high baryon density medium.

In this poster, we will report measurements of strange particle (K_s^0 , Λ) production in Au+Au collisions at $\sqrt{s_{NN}} = 7.2$ GeV. The data were taken in 2018 by the STAR experiment with the fixed target configuration. After correcting for detector acceptance and tracking efficiency, invariant yields and rapidity density distributions of K_s^0 and Λ will be presented. The physics implications on the collision dynamics will also be discussed.

Category

Experiment

Collaboration (if applicable)

STAR

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