

Strangeness production in the NA61/SHINE experiment at the CERN SPS energy range

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NA61/SHINE is a multi-purpose fixed-target experiment located at the H2 beamline of the CERN North Area. One of the main goals of the experiment is to study the phase transition and search for the critical point of the strongly interacting matter. Strangeness production is a long-known valuable probe for understanding particle production in high-energy physics due to the absence of strange valence quarks in the initial collision state.

This talk will present the results on strangeness production in p+p, Be+Be, and Ar+Sc collisions in the SPS energy range ($\sqrt{s_{NN}}=5.1-17.3$ GeV) measured by NA61/SHINE. The talk will emphasize the importance of the results for discussion of onset of deconfinement and onset of fireball. The obtained results will be compared to available world data and selected theoretical models.

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