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Strangeness production in high-energy hadronic and nuclear collisions continues to be one of the central topics in the study of strongly interacting matter. The data collected by the NA61/SHINE experiment at the CERN SPS North Area allows for a comprehensive scan of the strangeness production across various collision energies and system sizes.

This presentation will focus on the new results of the strangeness production in central collisions of medium-sized nuclei, such as Ar+Sc, at the SPS energy range. In particular, the results for Lambda hyperons and charged and neutral K mesons will be shown. The energy and system size dependencies of Lambda-to-pion and strangeness-to-pion ratios are also explored. Moreover, an unexpected excess of charged over neutral meson production in Ar+Sc and pi-+C interactions will be presented. The obtained results will be compared with predictions from selected particle production models, as well as with existing world data from proton-proton and nucleus-nucleus collisions.

Category

Experiment

Collaboration (if applicable)

NA61/SHINE

Author: BALKOVA, Yuliia (University of Silesia (PL))

Presenter: BALKOVA, Yuliia (University of Silesia (PL))

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