

Strangeness in Quark Matter 2019



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Strangeness production at the CERN SPS energies

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Strangeness production in nucleus-nucleus collisions has been a subject of studies over 40 years. It has played a key role in a search for the quark-gluon plasma and the onset of deconfinement in the collisions. Here of particular importance are results of the NA49 and NA61/SHINE experiments at CERN SPS and the STAR BES experiment at RHIC. They have conducted measurements of hadron production properties in nucleus-nucleus, proton-proton and proton-nucleus interactions as a function of collision energy and size of the colliding nuclei. In this talk, results on strangeness production from these experiments will be reviewed and compared. The collision energy dependence will be extended by presenting results from SIS/AGS and LHC. In from NA61/SHINE and p+p, Be+Be and Ar+Sc collisions in the SPS energy range are reviewed. An overview of statistical and dynamical models of strangeness production in the vicinity of phase transition will be presented as well. Predictions of the models will be compared with the experimental results and, most importantly, with new results on collisions of intermediate mass nuclei.

Collaboration name

NA61

Track

Strangeness and Light Flavour

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