



Contribution ID: 711

Type: Oral presentation

News on strangeness production from NA61/SHINE

Wednesday, 6 April 2022 11:10 (20 minutes)

NA61/SHINE is a fixed target experiment at the CERN Super Proton Synchrotron. The main goals of the experiment are to discover the critical point of strongly interacting matter and to study the properties of the onset of deconfinement. In order to reach these goals, a study of hadron production properties is performed in nucleus-nucleus, proton-proton and proton-nucleus interactions as a function of collision energy and size of the colliding nuclei. The experiment has recently completed data acquisition for its original programme on strong interactions. The Collaboration has gathered rich data in a two-dimensional scan: varying the beam energy and the sizes of colliding nuclei.

In this talk, the new results on identified charged kaon production in the intermediate size system ($40\text{Ar}+45\text{Sc}$ and $7\text{Be}+9\text{Be}$) collisions at SPS beam momentum range ($13\sqrt{s}-150\sqrt{s}$ GeV/ \sqrt{s}) will be shown. Additionally, the new measurements of strange resonances ($K_0^*(892)$, $\Xi_0(1530)$ and $\Xi(1530)$) and strange baryons ($\Xi^-(1321)$, $\Xi^+(1321)$) produced in p+p interactions will be presented. The kinematic distributions and measured multiplicities of identified hadrons will be compared with available world data and relevant models in the context of collision energy and system size dependence.

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Session Classification: Parallel Session T05: QGP in small and medium systems

Track Classification: QGP in small and medium systems