Strangness production in p+p interactions at 20, 31, 40, 80 and 158 GeV/c from NA61/SHINE at the CERN SPS

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The NA61/SHINE experiment aims to discover the critical point of strongly interacting matter and study the emergence of the onset of deconfinement. These goals are achieved by measurements of hadron production properties, in particular of kaons in nucleus-nucleus, proton-proton and proton-nucleus interactions as a function of collision energy and size of the colliding nuclei.

In this contribution inclusive spectra of identified hadrons in p+p interactions at the SPS energies will be presented as a function of collision energy, transverse momentum/mass and rapidity. These measurements will be compared with the world data, theoretical models, as well as results from Pb+Pb collisions of the NA49 experiment. Finally, it will be shown that even in p+p interactions kaon production properties exhibit rapid changes in the SPS energy range reminiscent of those seen in Pb+Pb collisions.