

# Exploring the baryon-to-meson transition region at NICA energies

## Content

Data from heavy-ion collision experiments such as SPS, AGS and RHIC have shown a sharp peak in the ratio  $K^+/\pi^+$  at a value  $\sim 8$  GeV per nucleon, whereas the ratio  $K^-/\pi^-$  shows a monotonically increasing behaviour. The energy region in which this phenomenon occurs will be explored by the NICA experiment and is characterized by a high baryonic density. The statistical models predict that the hadronic medium transits from a baryon- to a meson-dominated gas as the collision energy increases. The transition is expected to take place at a temperature around 140 MeV and a baryon chemical potential around 420 MeV, corresponding to a collision energy of 8.2 GeV per nucleon (center-of-mass energy). In this talk, we employ Monte Carlo simulated data samples in order to discuss some of the production mechanisms at the energy region where this transition happens.

## Summary

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