

K^*/K ratio and the time between freeze-outs for intermediate-mass Ar+Sc system at the SPS energy range

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Resonance production is one of the key observables to study the dynamics of high-energy collisions. The analysis of $K^*(892)^0$ meson allows to better understand the time evolution of high-energy nucleus-nucleus collision. Namely, the ratio of $K^*(892)^0$ to charged kaons is used to determine the time between chemical and kinetic freeze-outs.

In this talk, the first NA61/SHINE results of the analysis of $K^*(892)^0$ production in central Ar+Sc collisions at three SPS energies ($\sqrt{s_{NN}} = 8.8, 11.9, 16.8$ GeV) will be presented. The $K^*(892)^0/K^\pm$ yield ratios will be compared with corresponding results in p+p collisions, allowing to estimate the time between kinetic and thermal freezeouts for Ar+Sc collisions. These first results for intermediate-mass nucleus-nucleus systems will be compared with the results of heavier systems at a similar energy range.

Alternate track

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Yes

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