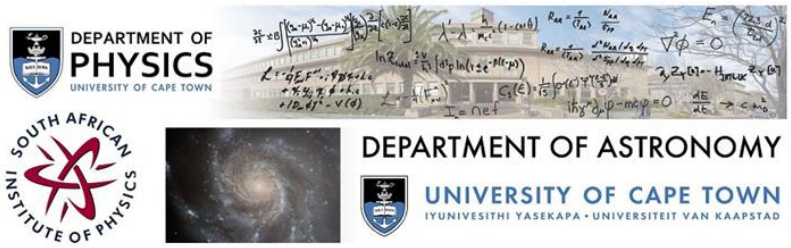
SAIP2016



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Thermal Model Description of Collisions of Small Systems

Wednesday 06 Jul 2016 at 10:00 (00h20')

Abstract :

Recently, two experimental observations have attracted high interest: 1. The maxima in the excitation function of the K+/pi+ and Lambda/pi+ ratios around sqrt(sNN) = 8 GeV, while no maximum is seen in the K-/pi- ratio. 2. A continuous evolution of the ratios (multi-)strange-over-pi as a function of the multiplicity in pp, p-Pb and Pb-Pb collisions at LHC energies.Prediction within the thermal-statistical model of particle ratios from the lowest up to LHC energies and from pp up to central heavy-ion collisions will be given. It will be shown why maxima occur, how they evolve when studying smaller systems (E.g. the maximum of the K+/pi+ ratio will hardly be visible in pp, while the maximum in the Lambda/pi ratio is expected to remain also in pp).Using the strangeness canonical ensemble, the key parameter is the strangeness correlation volume. It turns out that this quantity also plays a dominating role in describing the variation of the particle ratios from pp to Pb-Pb collisions at LHC energies.

Award :

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