Meson production in an effective relativistic mean field model

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We study the meson yield ratios for high energy central nucleus-nucleus collisions by means of an effective relativistic mean-field model with the inclusion of the full octet of baryons, the Δ-isobars degrees of freedom and the lightest pseudoscalar and vector mesons. These last particles are considered in the so-called one-body contribution, taking into account of an effective chemical potential and an effective mass depending on the self-consistent interaction between baryons [1]. The analysis is performed by requiring the Gibbs conditions on the global conservation of baryon number, electric charge fraction and zero net strangeness. In this context, we study the influence of the Δ-isobars degrees of freedom in the behavior of different meson ratios and strangeness production.

[1] A. Lavagno, *Hot and dense hadronic matter in an effective mean field approach*, to be published in Phys. Rev. C (2010).

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