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ON HYPERNUCLEAR STATE IN HIGH ENERGY HEAVY ION COLLISIONS

Content :

New mechanism for interpretation of the enhanced yield of hyperons and strange mesons ("horn" effect) observed in central heavy ion collisions in the experiment NA49 at SPS is given. We argue that the data indicate the transition of the nuclear matter in the overlap region of colliding nuclei to the hyperon phase. In this region nucleons with some probability transform to hyperons and positive kaons. According to this mechanism there is no room for the 1st order phase transition and the critical point. The proposed mechanism results in the important predictions at the energy range of NICA and FAIR: transition to isobar and hyperon nuclear states, polarization of (multi)strange hyperons, vorticity and asymmetry effect.

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