

## Hot and dense nuclear matter in an extended mean field approach

We investigate the equation of state of hadronic and quark-gluon matter at finite temperature and baryon density considering the possible formation of mixed phase in relativistic heavy ion collisions. The analysis is performed by requiring the Gibbs conditions on the global conservation of baryon number, electric charge and strangeness number. For hadronic phase, we study an extended relativistic mean-field theoretical model with the inclusion of Delta-isobar, hyperons and kaons degrees of freedom. For the quark sector, we employ a MIT-Bag model with lowest order perturbative corrections. In this context, the behavior of the strangeness chemical potential and the possibility of strangeness-antistrangeness separation in the hadronic-quark-gluon mixed phase are analyzed.

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