

Transition to deconfined phase in neutron stars

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The effects of the transition to quark matter on the structure of neutron stars are discussed. The hadron phase is obtained including two and three body forces which makes the nuclear matter equation of state quite stiff. The quark phase is obtained from a model in which the quarks are confined by a density dependent mass according to a scaling law. The latter is required by the chiral symmetry breaking. A quenching of the neutron star mass is the main effect of the hadron-to quark transition. The competition with other phases, such as kaon condensation and hyperons, is also discussed.