

Composition and structure of protoneutron stars with the Brueckner-Bethe-Goldstone theory

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I discuss the finite temperature equation of state (EoS) of nuclear matter, constructed with the Brueckner-Bethe-Goldstone many-body theory, and the structure of protoneutron stars (PNSs). Some consequences of the hadron-quark phase transition will be analyzed by comparing the MIT bag and the Nambu–Jona-Lasinio models for the quark phase, as well as differences in the PNS structure predicted by those models.