

Abstract Submitted
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Nuclear Equation of State of High Density Matter.¹ JIRINA STONE², University of Oxford, UK — The density and temperature dependence of energy per particle of a system (the Equation of State - EOS) is a fundamental ingredient of all models of nuclear matter and stars. As baryons and leptons form the main components of all stars, knowledge of nuclear physics and weak interactions is essential for correct understanding of birth, life and death of stars. We compare results obtained with EOS's based on a selection of well established nucleon-nucleon effective interactions in comparison with new results from the quark-meson coupling model and the ORNL-Oxford effective potential. Properties of cold non-rotating and rapidly rotating neutron stars, calculated on the basis of the models, are presented and discussed.

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