Neutron Star Crusts as Low Temperature Laboratories

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Neutron stars, stellar remnants of core-collapse supernova explosions, were first discovered as radio pulsars. The salient features of the neutron star lie in its compactness and cooling, which give us an opportunity of "observing" matter at extremely high density and low temperature. In this talk, I would like to focus on the crustal part of the star, which contains a lattice of nuclei, superfluid neutrons, and possibly liquid crystalline structures of a nuclear matter liquid-gas mixture, and give implications for pulsar glitches and magnetar quasi-periodic oscillations.

Section: OT - Other topics and model systems

Keywords: neutron stars, inhomogeneous nuclear matter, superfluidity

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