

Unified Equation of State for Magnetar Crusts

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Magnetars form a specific class of neutron stars characterised by extreme magnetic fields of order $10^{14} - 10^{15}$ G at their surface, and potentially much stronger in their interior. The equation of state and the composition of the outer and inner crusts are calculated in a unified and consistent way within the nuclear-energy density functional theory and taking into account Landau-Rabi quantization of electron motion.

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