

## Rotation-induced deep crustal heating of millisecond pulsars

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The spin-down of a neutron star, e.g., due to magneto-dipole losses, results in compression of the stellar matter and induces nuclear reactions at phase transitions between different nuclear species in the crust. We show that this mechanism is effective in heating recycled pulsars, in which the previous accretion process has already been compressing the crust, so it is not in nuclear equilibrium. We calculate the corresponding emissivity and confront it with available observations, showing that it might account for the likely thermal ultraviolet emission of PSR J0437-4715.

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