

# **Observations of thermal and nonthermal emission from pulsars**

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Chandra and XMM-Newton observations of about 60 isolated (nonaccreting) pulsars have provided valuable data on the X-ray properties of these objects. Thanks to the high sensitivity and spectral resolution of the Chandra ACIS and XMM EPIC detectors, we can separate the thermal and nonthermal components of their spectra and study the radiation from the neutron star surfaces and magnetospheres with much higher certainty than it was possible in the pre-Chandra era. The high spatial resolution of Chandra data allows one to separate the pulsar radiation from that of compact pulsar wind nebulae (PWNe) around young pulsars and study the PWN morphology and spectra. The large sample of pulsars and PWNe observed with the Chandra and XMM-Newton observatories made it possible to examine the correlations between various properties of these objects and their evolution. In particular, thermal X-ray emission, observed from about 20 pulsars, allows one to measure the surface temperatures and radii of neutron stars and constrain the properties of the superdense matter in their interiors. I will overview the general properties of thermal and nonthermal emission from pulsars and present most interesting results of observations of individual objects.