

# The magnificent seven: Similarities and differences

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**ABSTRACT:** Presently seven nearby radio-quiet isolated neutron stars with thermal X-ray emission are known which are sometimes called the “Magnificent Seven”. At least five of them exhibit pulsations in their X-ray flux with periods in the range of 3.4 s to 11.4 s. XMM-Newton observations revealed broad absorption lines in the X-ray spectra which may be interpreted as due to resonant absorption at the proton cyclotron energy. The inferred line energies suggest magnetic field strengths of  $10^{13-14}$  G. Pulse-phase spectroscopy of the brightest pulsars show that these features vary with pulse phase. Although the Magnificent Seven form a group of isolated neutron stars with similar properties they also show differences. I’ll review our present knowledge about this group of isolated neutron stars.