# High Resolution Spectroscopy of Two Isolated Pulsars

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## Abstract

We present high resolution spectra of the pulsars PSR B0656+14 and 4U 0142+61 using the *Chandra* grating spectrometers. Both pulsars have estimated magnetic fields in excess of $10^{12}$ G and have no clearly associated supernova remnants. The pulsar 4U 0142+61 is often cited as an example of an "anomalous X-ray pulsar" with a significantly larger magnetic field. The broad-band spectra require a steep power law component to explain the high energy data while the spectral peaks appear to be dominated by a thermal component with a observed temperatures of $\sim 7 \times 10^5$ K for PSR B0656+14 and $\sim 5 \times 10^6$ K for 4U 0142+61. We present pulse-phased spectra and results from a detailed search for spectral features.

CATEGORY: SUPERNOVAE, SUPERNOVA REMNANTS AND ISOLATED NEUTRON STARS