X-ray emission from the young pulsar J1357-6429 and similar objects

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1. Introduction
X-ray emission from a nonthermal source can consist of two distinct spatial components: the nonthermal emission due to pulsar activity and emission from the neutron surface.

2. Observations
J1357 was observed in 2007 August for 3.16 and 4 ks of off-axis exposures with the EPIC and MOS instruments (respectively), in full-frame ‘‘Window-mode’’ with the highest available time resolution of 74 s. The off-axis exposures with a 0.16 mm time resolution.

3. Spatial analysis
The X-ray spectra of J1357 were extracted from the MOS/EPIC, EPIC and MOS data, with the corresponding counts rate between 3.64 and 3.80 kHz. The observed X-ray spectrum of J1357 was found in these HRC-S data.

4. Timing and spectral analysis
The detected line index indicates the main level.

5. Spectral analysis
The X-ray spectra of J1357 were extracted from the MOS/EPIC, EPIC and MOS data, with the corresponding counts rate between 3.64 and 3.80 kHz. The observed X-ray spectrum of J1357 was found in these HRC-S data.

6. Summary

References

More details on this work can be found in

Figure 6 presents X-ray spectra with and without proton superthermal (Yakovlev & Petrich 2004), as well as in the effective (diffuse) surface temperatures for the six pulsars (Table 1). The superthermal radiation is a consequence of the nonthermal emission from the neutron surface. The observed X-ray spectra of J1357 were found in these HRC-S data.