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Continued hard X-ray activity from AXP/SGR 1E1547.0-5408 (INTEGRAL)

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Continued hard X-ray activity from AXP/SGR 1E1547.0-5408 (INTEGRAL)

ATel #1922; [P.R. den Hartog, L. Kuiper \(SRON\), W. Hermsen \(SRON, UvA\)](#)
on 30 Jan 2009; 16:20 UT

Distributed as an Instant Email Notice (Request for Observations)

Password Certification: P.R. den Hartog (Hartog@sron.nl)

Subjects: X-ray, Gamma Ray, Neutron Stars, Soft Gamma-ray Repeaters, Transients

INTEGRAL continues observing the recently activated AXP/SGR 1E1547.0-5408 (GCN #8833). After the first 100ks public ToO from 2009 Jan. 24, 15:30 (UTC) to Jan. 25, 22:14 (Revolution 767, ATEL #1908) INTEGRAL continues observing the source for 300 ks as part of an approved ToO program. The observations started on Jan. 28 14:21 and will cover INTEGRAL revolutions 768 up to 770, ending on Feb. 2 2009.

We have analysed 200 ks near-real-time data of revolutions 767 (public; 100ks), 768 (47 ks) and 769 (53 ks available sofar) in a concise manner. 1E1547.0-5408 is still in a high state at hard X-rays (>20 keV) and significantly detected in each revolution with significances higher than 6.8 sigma. 1E1547.0-5408 is still exhibiting bursting activity in Revs 768 and 769 (e.g. INTEGRAL Burst Alert System IBAS). Pulsed hard X-ray emission (>20 keV) has been detected from the INTEGRAL data (Kuiper et al. ATEL #1921).

The spectra taken from each revolution can be described by a single power law. The 20 to 150 keV model fluxes and photon indices for each revolution are:

| Rev | Time span | Flux +/- err (erg/cm ² /s) | Photon index +/- err |
|-----|----------------------------|---------------------------------------|----------------------|
| 767 | JAN24 15:30 -- JAN25 22:14 | (2.78 +/- 0.18)*10 ⁻¹⁰ | 1.55 +/- 0.10 |
| 768 | JAN28 14:21 -- JAN29 03:42 | (1.86 +/- 0.27)*10 ⁻¹⁰ | 1.44 +/- 0.21 |
| 769 | JAN29 15:05 -- JAN30 07:25 | (1.87 +/- 0.24)*10 ⁻¹⁰ | 1.66 +/- 0.21 |

The intensity of the hard X-ray emission decreased only ~33% between Jan. 25 and Jan. 28. Note that the spectral shape remains stable over these observations.

These results are considered preliminary as they are derived from near-real-time data. Further analyses are ongoing.

We thank the staff at ISOC for promptly implementing the INTEGRAL ToO observations and ISDC scientists for making the near-real-time data directly available.

We encourage further monitoring observations at other wavelengths (e.g. Radio, IR and X-ray) for possible correlation studies.

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