

Technical University of Denmark



INTEGRAL Galactic Plane Scans detect enhanced activity from the HMXBs IGR J19294+1816 and 4U 1909+07

Drave, S. P.; Sguera, V.; Fiocchi, M.; Bazzano, A.; Bird, A. J.; Kuulkers, E.; Natalucci, L.; Tarana, A.; Chenevez, Jérôme

Published in:

The Astronomer's Telegram : ATel

Publication date:

2013

Document Version

Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):

Drave, S. P., Sguera, V., Fiocchi, M., Bazzano, A., Bird, A. J., Kuulkers, E., ... Chenevez, J. (2013). INTEGRAL Galactic Plane Scans detect enhanced activity from the HMXBs IGR J19294+1816 and 4U 1909+07. The Astronomer's Telegram : ATel, [ATel #5079].

DTU Library

Technical Information Center of Denmark

General rights

Copyright and moral rights for the publications made accessible in the public portal are retained by the authors and/or other copyright owners and it is a condition of accessing publications that users recognise and abide by the legal requirements associated with these rights.

- Users may download and print one copy of any publication from the public portal for the purpose of private study or research.
- You may not further distribute the material or use it for any profit-making activity or commercial gain
- You may freely distribute the URL identifying the publication in the public portal

If you believe that this document breaches copyright please contact us providing details, and we will remove access to the work immediately and investigate your claim.

Outside
[GCN](#)
[IAUCs](#)

Other
 MacOS: [Dashboard Widget](#)
 Follow ATel on [Twitter](#)
[ATELstream](#)
[ATel Community Site](#)

The Astronomer's Telegram

[Post a New Telegram](#) | [Search](#) | [Information](#)
[Telegram Index](#)
[Obtain Credential To Post](#) | [RSS Feeds](#) | [Email Settings](#)

Present Time: 1 Jul 2013; 14:08 UT

This space for free for your conference.



[[Previous](#) | [Next](#) | [ADS](#)]

INTEGRAL Galactic Plane Scans detect enhanced activity from the HMXBs IGR J19294+1816 and 4U 1909+07

ATel #5079; [S. P. Drave \(Univ. of Southampton, UK\)](#), [V. Sguera \(INAF/IASF Bologna, Italy\)](#), [M. Fiocchi, A. Bazzano \(INAF/IASF Roma, Italy\)](#), [A. J. Bird \(Univ. of Southampton, UK\)](#), [E. Kuulkers \(ESA/ESAC, Spain\)](#), [L. Natalucci, A. Tarana \(INAF/IASF Roma, Italy\)](#) and [J. Chenevez \(National Space Institute DTU, Denmark\)](#) on behalf of the INTEGRAL/GPS team
 on 21 May 2013; 10:46 UT

Credential Certification: [Sebastian Drave \(sd805@soton.ac.uk\)](#)

Subjects: X-ray, Binary, Transient

Referred to by ATel #: [5104](#), [5119](#)

Enhanced hard X-ray emission has been detected from the high mass X-ray binary systems IGR J19294+1816 and 4U 1909+07 during recent INTEGRAL observations of the Cygnus region of the Galactic Plane performed in revolution 1294 between 2013-05-19 UTC 01:32:52 and 10:55:38. Neither source was detected at a significant level during observations in the previous revolution (1293) performed between 2013-05-18 UTC 03:55:28 and 15:59:42.

IGR J19294+1816 was detected at an IBIS/ISGRI count rate of 3.1 ± 0.4 counts s^{-1} in the 18-60 keV band, corresponding to a significance of 7.2 sigma and a flux of ~ 17 mCrab, for an exposure of 19.7 ks. 4U 1909+07 was detected at a count rate of 3.7 ± 0.5 counts s^{-1} in the same band, corresponding to a significance of 7.0 sigma and a flux of ~ 20 mCrab (with an exposure of 13.5 ks). Both sources were also in the field of view of the soft X-ray JEM-X instrument for total effective exposures of ~ 7.9 and ~ 2.9 ks respectively but neither were detected, with 6sigma flux upper limits of 6 mCrab and 8 mCrab in the 3-10 keV band respectively.

4U 1909+07 is a wind-fed SgXRB pulsar whose past variability is consistent with the enhanced flux detected in these observations. IGR J19294+1816 is a likely BeXRB pulsar that displays recurrent outbursts, of an approximate duration of 2 months (Bozzo et al. 2011, A&A, 531, A65), modulated on the 117.2 day orbital period (Corbet and Krimm 2009, ATel #2008) along with additional fast flaring behaviour, more typical of Supergiant Fast X-ray Transients (~ 2000 -3000s, see Rodriguez et al. 2009, A&A, 508, 889). The date of this new detection is consistent with the time of peak activity predicted by Corbet and Krimm 2009 (ATel #2008) suggesting that these observations are detecting the onset of a new outburst of the system rather than an isolated fast flare. We encourage multi-wavelength observations of IGR J19294+1816 to follow the evolution of the outburst from this early stage. INTEGRAL will be performing regular hard X-ray monitoring of the Galactic Plane over the coming months with the next observation of this region scheduled to begin on 2013-05-26.

A full description of the INTEGRAL Galactic Plane Scanning programme, along with links to light curves and sky maps can be found in ATel #3361. Please note, for consistency with the GPS archive the IBIS/ISGRI analysis presented here was performed with version 9 of the INTEGRAL Offline Science Analysis (OSA) software. However the results are also seen to be consistent with the current OSA release (v.10).

The authors wish to thank the ISOC observation planning team for their assistance in the design and implementation of the GPS pointing strategy.

Related

- 5131 [Confirmation of the superorbital modulation of the high mass X-ray binaries 4U 1909+07, IGR J16479-4514 and IGR J16418-4532 with INTEGRAL/IBIS](#)
- 5126 [Superorbital Modulation in the Wind-Accretion HMXBs IGR J16418-4532 and IGR J16479-4514](#)
- 5119 [Superorbital Periodicity in the Wind-Accretion HMXB 4U 1909+07 \(= X 1908+075\)](#)
- 5104 [Swift/XRT follow-up of the periodic activity of the transient pulsar IGR J19294+1816](#)
- 5079 [INTEGRAL Galactic Plane Scans detect enhanced activity from the HMXBs IGR J19294+1816 and 4U 1909+07](#)
- 4136 [Swift follow-up of the renewed activity of IGR J19294+1816](#)
- 4135 [INTEGRAL detects renewed activity from IGR J19294+1816](#)
- 3917 [Outburst of IGR J19294+1816 Detected with Fermi/GBM](#)
- 3361 [Announcement of INTEGRAL Galactic Plane monitoring program and detection of 2 new hard X-ray sources.](#)
- 2985 [Fermi GBM Detects Pulsations from IGR J19294+1816](#)
- 2983 [INTEGRAL detects renewed activity from IGR J19294+1816](#)
- 2766 [Discovery of the Pulse Period of IGR J16493-4348 from RXTE PCA Observations](#)
- 2599 [A 6.8 Day Period in IGR J16493-4348 from Swift/BAT and RXTE/PCA Observations](#)
- 2008 [A 117-day Period in IGR J19294+1816](#)
- 2002 [IGR J19294+1816 is an X-ray Pulsar](#)
- 1999 [Swift/BAT detection of IGR J19294+1816](#)
- 1998 [Swift archival observations of the field around the new INTEGRAL source IGR J19294+1816](#)
- 1997 [INTEGRAL discovers the new hard X-ray source IGR J19294+1816](#)
- 779 [Swift/BAT and RXTE/ASM Discovery of the Orbital Period of IGR J16418-4532](#)
- 457 [IGR J16493-4348 - a radiopulsar or a new X-ray binary](#)

[Tweet](#) 2

[Recommend](#) 0 

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

rrutledge@astronomerstelegam.org