



UvA-DARE (Digital Academic Repository)

INTEGRAL observations of Swift J174540.7-290015

Esposito, V.; Kuulkers, E.; Bazzano, A.; Beckmann, V.; Bird, T.; Bodaghee, A.; Chenevez, J.; Del Santo, M.; Domingo, A.; Jonker, P.; Kretschmar, P.; Markwardt, C.; Paizis, A.; Pottschmidt, K.; Sánchez-Fernández, C.; Wijnands, R.; Bozzo, E.; Ferrigno, C.

Publication date

2016

Document Version

Final published version

Published in

The astronomer's telegram

License

Unspecified

[Link to publication](#)

Citation for published version (APA):

Esposito, V., Kuulkers, E., Bazzano, A., Beckmann, V., Bird, T., Bodaghee, A., Chenevez, J., Del Santo, M., Domingo, A., Jonker, P., Kretschmar, P., Markwardt, C., Paizis, A., Pottschmidt, K., Sánchez-Fernández, C., Wijnands, R., Bozzo, E., & Ferrigno, C. (2016). INTEGRAL observations of Swift J174540.7-290015. *The astronomer's telegram*, 8684. <http://www.astronomerstelegam.org/?read=8684>

General rights

It is not permitted to download or to forward/distribute the text or part of it without the consent of the author(s) and/or copyright holder(s), other than for strictly personal, individual use, unless the work is under an open content license (like Creative Commons).

Disclaimer/Complaints regulations

If you believe that digital publication of certain material infringes any of your rights or (privacy) interests, please let the Library know, stating your reasons. In case of a legitimate complaint, the Library will make the material inaccessible and/or remove it from the website. Please Ask the Library: <https://uba.uva.nl/en/contact>, or a letter to: Library of the University of Amsterdam, Secretariat, Singel 425, 1012 WP Amsterdam, The Netherlands. You will be contacted as soon as possible.

UvA-DARE is a service provided by the library of the University of Amsterdam (<https://dare.uva.nl>)

Outside

GCN
IAUCs

Other

ATel on [Twitter](#) and [Facebook](#)
ATELstream
ATel Community Site[[Previous](#) | [Next](#) | [ADS](#)]

INTEGRAL observations of Swift J174540.7-290015

ATel #8684; *V. Esposito (ISDC, Switzerland), E. Kuulkers (EAS/ESAC, Spain), A. Bazzano (INAF/IAPS, Italy), V. Beckmann (APC, France), T. Bird (Southampton, UK), A. Bodaghee (GCSU, USA), J. Chenevez (DTU Space, Denmark), M. Del Santo (INAF/IASF-Pa, Italy), A. Domingo (CAB/INTA-CSIC, Spain), P. Jonker (SRON, The Netherlands), P. Kretschmar (ESA/ESAC, Spain), C. Markwardt (GSFC, USA), A. Paizis (INAF/IASF-Mi, Italy), K. Pottschmidt (UMBC/NASA GSFC, USA), C. Sánchez-Fernández (ESA/ESAC, Spain), R. Wijnands (UvA, The Netherlands), E. Bozzo, C. Ferrigno (ISDC, Switzerland)*

on 12 Feb 2016; 16:59 UT

Credential Certification: *E. Bozzo (enrico.bozzo@unige.ch)*

Subjects: X-ray, Transient

Referred to by ATel #: [8729](#), [8737](#), [8793](#), [8881](#)

The newly discovered X-ray transient Swift J174540.7-290015 (ATel #8649) was observed within the field-of-view of the IBIS/ISGRI and JEM-X instruments on-board INTEGRAL on 2016 February 11 from 14:12 to 17:22 (UTC), while the satellite was pointing toward the Galactic Bulge (ATel #438). The total exposure time was 10.8 ks.

The source was detected in the IBIS/ISGRI mosaic at a significance of 21 sigma in the 20-40 keV energy band and 15 sigma in the 40-80 keV energy range. The corresponding fluxes were 41 \pm 2 mCrab and 42 \pm 3 mCrab. The source is also detected by JEM-X at a significance of 18 sigma in the 3-10 keV energy band and 11 sigma in the 10-20 keV energy band. The corresponding fluxes were 52 \pm 3 mCrab and 46 \pm 5 mCrab. All uncertainties given on the above fluxes are only statistical and at 1 sigma confidence level.

The combined ISGRI+JEM-X spectrum could be well fit (reduced $\chi^2/\text{d.o.f.}=0.9/17$) by using a simple power-law model with the column density fixed at 9.1E22 cm⁻², as measured by Swift/XRT (see ATel #8649). The measured power-law photon index is 2.7 \pm 0.2 and the spectral flux evaluated from the fit is of 7.5E-10 ergs/cm²/s in the 5-20 keV energy band and 8.3E-10 ergs/cm²/s in the 20-100 keV energy band.

We note that neither IBIS/ISGRI nor JEM-X are able to discriminate between the different X-ray emitting sources currently active in the vicinities of Swift J174540.7-290015 due to the limited angular resolution of these instruments compared to, e.g., Swift/XRT. However, we used previous

Related

- 13839 [Renewed activity of the Galactic center transient Swift J174535.5-285921 seen with Swift/XRT](#)
- 13683 [Swift/XRT detects a new outburst of the Galactic Center transient GRS 1741.9-2853](#)
- 13453 [Swift/XRT detects \(continued\) activity of the Galactic center transient AX J1745.6-2901](#)
- 13150 [Swift/XRT detects a new outburst of the Galactic Center transient AX J1745.6-2901](#)
- 11263 [Swift resumes X-ray monitoring observations of the Galactic center in 2018](#)
- 10900 [Swift/XRT detects activity of a very-faint X-ray transient, likely the neutron star X-ray binary AX J1745.6-2901, near Sgr A*](#)
- 10859 [Swift/XRT detects a new accretion outburst of the Galactic center neutron star transient GRS 1741-2853](#)
- 10323 [Swift/XRT detects renewed activity of the Galactic center transient AX J1745.6-2901](#)
- 10089 [Swift resumes X-ray monitoring observations of the Galactic center in 2017](#)
- 9551 [Swift/XRT detects renewed activity of the Galactic center transient XMM J174457-2850.3](#)
- 9236 [Swift/XRT detects renewed activity of the Galactic center X-ray transient Swift J174535.5-285921](#)
- 9196 [Continued Swift/XRT observations of the new Galactic center transients SWIFT J174540.2-290037 and SWIFT J174540.7-290015](#)
- 9152 [VVV near-infrared observations of the Swift J174540.2-290037 field](#)

INTEGRAL observations of the Galactic Bulge to verify that none of the other sources could provide a dominating contribution in the 3-20 keV and 20-100 keV energy bands. Observations carried out in the satellite revolution 1597 (from 2015-10-11 at 05:57 to 09:34 UTC) and 1603 (from 2015-10-27 at 03:57 to 08:41 UTC) showed that there is no overlapping source detected by IBIS/ISGRI and only 1A 1742-289 has a position compatible with that of Swift J174540.7-290015 in JEM-X. The latter source is always detected by JEM-X in all the above mentioned revolutions at a flux of ~ 15 mCrab in the 3-10 keV energy band and ~ 10 mCrab in the 10-20 keV energy band. We are thus confident that the reported spectrum and fluxes for Swift J174540.7-290015 from IBIS/ISGRI cannot be largely contaminated by any other source currently active around the new Swift transients, while for JEM-X a contamination at a level of 20% is possible.

Further observations of the Galactic Bulge with INTEGRAL are already planned for the coming weeks.

9109	Swift/XRT detection of another active X-ray transient close to Sgr A*
9000	Hard X-ray activity from the direction to Sgr A* revealed by INTEGRAL
8881	Swift/XRT detects renewed activity of the Galactic center transient GRS 1741-2853
8793	A Search for a Radio Counterpart to Swift J174540.7-290015
8746	Chandra Position of Galactic Center X-ray Transient Swift J174540.7-290015
8737	VVV near-infrared observations of the Swift J174540.7-290015 field
8729	Search for pulsed radio emission from SWIFT J174540.7-290015
8689	Near-IR source content of the error region for SWIFT J174540.7-290015
8684	INTEGRAL observations of Swift J174540.7-290015
8649	New Galactic Center X-ray Transient Detected by Swift: SWIFT J174540.7-290015
7023	Swift resumes X-ray monitoring observations of the Galactic center
5847	Swift/XRT observations of the Galactic center have resumed
5332	Report on (non-)activity in the Galactic bulge region as seen by INTEGRAL
5246	Swift/XRT detects activity of the Galactic center transient GRS 1741-2853
5226	New Swift/XRT observations confirm that the active Galactic center transient is AX J1745.6-2901
5222	Swift/XRT monitoring observations detect an active X-ray transient near the Galactic center
5095	Chandra confirmation of transient X-ray activity from CXOGC J174540.0-290005 north of the Galactic Center
5076	Detection of radio pulsations at 22 GHz from the Magnetar PSR J1745-2900 in the archival data from 2011
5074	Swift/XRT detection of an active X-ray transient near the Galactic center
5073	NuSTAR detection of a transient in outburst north of Sgr A*
5070	Search for pulsed radio emission from PSR J1745-2900 at 1 GHz with the GMRT
5064	Polarisation profiles and rotation measure of PSR J1745-2900 measured at Effelsberg
5058	On-going radio observations of PSR J1745-2900 at Effelsberg, Nancay, and Jodrell Bank: flux density estimates, polarisation properties, spin-down measurement, and the highest dispersion measure measured.
5053	Detection by Sardinia Radio Telescope of radio pulses at 7 GHz from the Magnetar PSR J1745-2900 in the Galactic center region
5046	Spin-down Measurement of PSR J1745-2900: a New Magnetar
5043	Further radio pulsations from the direction of the NuSTAR 3.76-second X-ray pulsar, and a dispersion

	measure estimate.
5040	Detection of radio pulsations from the direction of the NuSTAR 3.76 second X-ray pulsar at 8.35 GHz
5037	Swift-BAT monitoring for additional bursts from SGR J1745-29 (Trigger 554491)
5035	Detection of radio pulsations from the direction of the Galactic center Soft Gamma-ray Repeater with Parkes and the GBT
5033	Searches for Dispersed Radio Pulsar Emission from the Sag A* SGR
5032	Chandra localization of the soft gamma repeater in the Galactic Center region
5027	Searches for radio pulsations from the 3.76 second NuSTAR X-ray pulsar in the Galactic centre.
5025	Limits on Radio Frequency Flux Density Changes in Sgr A*
5020	NuSTAR discovery of a 3.76 second pulsar in the Sgr A* region
5016	Continued Swift Monitoring of the Galactic Center Flare
5014	Brightening of Sgr A* at 32 GHz from VLA observations
5013	Possible brightening at 22 GHz of Sgr A*
5011	Swift XRT spectrum of transient X-ray source at Sgr A*'s position
5009	Swift/BAT detection of an SGR-like flare from near Sgr A*
5008	Ongoing X-ray activity from Sgr A*
5006	Large Flare from Sgr A* Detected by Swift
3525	Chandra Localization of the Galactic Center X-ray Transient Swift J174535.5-285921
3472	Swift/XRT discovers a new X-ray transient near the Galactic center: Swift J174535.5-285921
1513	Chandra detects Swift J174535.5-290135.6 in a relatively bright state

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

Derek Fox, Editor

rrutledge@astronomerstelegam.org

dfox@astronomerstelegam.org

Mansi M. Kasliwal, Co-Editor

mansi@astronomerstelegam.org