



UvA-DARE (Digital Academic Repository)

INTEGRAL detection of the neutron-star X-ray transient Swift J1734.5-3027

Kuulkers, E.; Eckert, D.; Ferrigno, C.; Chenevez, J.; Alfonso-Garzon, J.; Beckmann, V.; Bird, A.J.; Brandt, S.; Del Santo, M.; Domingo, A.; Ebisawa, K.; Jonker, P.G.; Kretschmar, P.; Markwardt, C.B.; Oosterbroek, T.; Paizis, A.; Pottschmidt, K.; Sanchez-Fernandez, C.; Wijnands, R.

Publication date

2013

Document Version

Final published version

Published in

The astronomer's telegram

[Link to publication](#)

Citation for published version (APA):

Kuulkers, E., Eckert, D., Ferrigno, C., Chenevez, J., Alfonso-Garzon, J., Beckmann, V., Bird, A. J., Brandt, S., Del Santo, M., Domingo, A., Ebisawa, K., Jonker, P. G., Kretschmar, P., Markwardt, C. B., Oosterbroek, T., Paizis, A., Pottschmidt, K., Sanchez-Fernandez, C., & Wijnands, R. (2013). INTEGRAL detection of the neutron-star X-ray transient Swift J1734.5-3027. *The astronomer's telegram*, 5361. <http://www.astronomerstelegram.org/?read=5361>

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>)

23 Jun 2014; 11:39 UT

Outside

GCN
IAUCs

Other

ATel on [Twitter](#) and [Facebook](#)
ATELstream
ATel Community Site
MacOS: [Dashboard Widget](#)This space for free for your
conference.IAU Symposium 305
Polarimetry: From the Sun to
Stars and Stellar
Environments
Costa Rica
Nov 30-Dec 5 2014[[Previous](#) | [Next](#) | [ADS](#)]

INTEGRAL detection of the neutron-star X-ray transient Swift J1734.5-3027

ATel #5361; *E. Kuulkers (ESA/ESAC, Spain), D. Eckert, C. Ferrigno (ISDC, University of Geneva), J. Chenevez (DTU Space, Denmark), J. Alfonso-Garzon (CAB/INTA-CSIC, Spain), V. Beckmann (APC, France), A. J. Bird (Southampton, UK), S. Brandt (DTU Space, Denmark), M. Del Santo (INAF/IAPS Roma, Italy), A. Domingo (CAB/INTA-CSIC, Spain), K. Ebisawa (U of Tokyo, JAXA/ISAS, Japan), P. G. Jonker (SRON/CfA/RU), P. Kretschmar (ESA/ESAC, Spain), C. B. Markwardt (NASA/GSFC, USA), T. Oosterbroek (ESA/ESTEC, The Netherlands), A. Paizis (INAF-IASF Milano, Italy), K. Pottschmidt (CRESST/UMBC, NASA/GSFC, USA), C. Sanchez-Fernandez (ESA/ESAC, Spain) & R. Wijnands (UvA, The Netherlands)*

*on 4 Sep 2013; 16:12 UT**Credential Certification: Erik Kuulkers (Erik.Kuulkers@sciops.esa.int)*

Subjects: X-ray, Binary, Neutron Star, Transient, Variables

Referred to by ATel #: [5448](#), [5646](#)

INTEGRAL Galactic bulge monitoring (see ATel #[438](#)) observations performed between UT 2013 September 3 20:43 and September 4 00:25 clearly reveal the newly detected neutron star X-ray transient Swift J1734.5-3027 (ATel #[5354](#), GCN #[15157](#), #[15172](#)). The JEM-X and IBIS/ISGRI flux averages during the observations are 14 \pm 3 mCrab (3-10 keV), 19 \pm 6 mCrab (10-25 keV), 23 \pm 2 mCrab (18-40 keV), and 17 \pm 2 mCrab (40-100 keV). The average IBIS/ISGRI spectrum, with an effective exposure of about 9 ksec, can be well (reduced $\chi^2=0.8$ for 9 degrees of freedom) fitted by a power-law with index 2.1 \pm 0.4, with a 20-100 keV flux of about 3.7e-10 erg/s/cm².

A re-analysis of the previous monitoring observations, performed between August 31 20:38 and September 1 00:19, shows that the source was already marginally detected by JEM-X and IBIS/ISGRI with fluxes of 7 \pm 2 mCrab (3-10 keV; 4 sigma significance) and 14 \pm 2 mCrab (18-40 keV; 6.6 sigma significance), respectively. The 10-25 keV JEM-X 6-sigma upper limit is about 4 mCrab, while the 40-100 keV IBIS/ISGRI 3-sigma upper limit is about 8 mCrab. The average IBIS/ISGRI spectrum for these observations, with an effective exposure of about 6.5 ksec, can be described by a power-law with index 2.3 \pm 0.8 and a 20-100 keV flux of about 2.3e-10 erg/s/cm² (reduced $\chi^2=1.5$ for 7 degrees of freedom).

We encourage further observations of this new X-ray transient, which showed a long Type I X-ray burst, possibly a superburst (ATel #[5354](#)), near the start of its current outburst, i.e., about 9 hours after the end of the INTEGRAL Galactic bulge observations on September 1.

[[Telegram Index](#)]

R. E. Rutledge, Editor-in-Chief

rrutledge@astronomerstelegram.org

Related

5646 [Swift J1734.5-3027: a bright burst in March 2013 detected in the long term BAT light curve.](#)

5448 [IGR J17344-3023 = Swift J1734.5-3027](#)

5447 [IGR J17344-3023: a new X-ray transient detected by INTEGRAL/JEM-X](#)

5361 [INTEGRAL detection of the neutron-star X-ray transient Swift J1734.5-3027](#)

5354 [Swift J1734.5-3027: Swift discovery of a possible new superbursting transient](#)

Derek Fox, Editor

Mansi M. Kasliwal, Co-Editor

`dfox@astronomerstelegam.org`

`mansi@astronomerstelegam.org`