Swift/XRT detects renewed activity of the Galactic center transient AX J1745.6-2901

Degenaar, N.; Reynolds, M.T.; Wijnands, R.; Miller, J.M.; Kennea, J.A.

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Swift/XRT detects renewed activity of the Galactic center transient AX J1745.6-2901

ATel #10323; N. Degenaar (U. of Amsterdam), M. T. Reynolds (U. of Michigan), R. Wijnands (U. of Amsterdam), J. M. Miller (U. of Michigan), J. A. Kennea (PSU), on behalf of a larger collaboration

on 26 Apr 2017; 15:28 UT

Credential Certification: Nathalie Degenaar (degenaar@uva.nl)

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

Our daily monitoring observations of the Galactic center with Swift/XRT (Degenaar et al. 2015, JHEAp, 7, 137) have revealed X-ray activity of a transient source located ~1.5' to the south-east of Sgr A*. This object is detected at a count rate of (1.3-2.5)E-2 c/s during two ~0.9 ks PC-mode observations performed on April 24-25 (obsID 00092395090-91).

Utilizing the online XRT data products tool (Evans et al. 2007, A&A 469, 379; 2009, MNRAS 397, 1177) for the two April 24-25 observations, we obtain an "enhanced" position (see Goad et al. 2007, A&A 476, 1401; Evans et al. 2009) for the active transient of RA = 17:45:35.92, DEC = -29:01:30.0 (J2000) with a 90% confidence error of 3.0". These coordinates are consistent with the Chandra localisation of the 8.4-hr eclipsing low-mass X-ray binary and thermonuclear X-ray burster AX J1745.6-2901 (ATel #1513). We thus conclude that we have likely detected renewed activity of this transient.

Assuming a power-law spectral shape with an index of 2 and a hydrogen column density of 2E23 cm^-2, the observed XRT count rates translate into a 2-10 keV unabsorbed flux of (5-10)E-12 erg/cm^2/s. This suggests that the current luminosity is (4-8)E34 erg/s for a distance of 8 kpc. Previous outbursts from AX J1745.6-2901 were detected through our Swift monitoring program in 2006, 2007-2008, 2010 (e.g. Degenaar et al. 2015) and 2013-2016 (e.g. ATels #5226, #9196). The years-long 2007-2008 and 2013-2016 outbursts reached a peak luminosity of several times ~E36 erg/s, whereas during the shorter (months-long) 2006 and 2010 outbursts the source did not become brighter than a few times E35 erg/s.

Daily Swift/XRT monitoring of the Galactic center is ongoing and our results can be found at http://www.swift-sgra.com
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Swift/XRT detects new outbursts of the galactic center X-ray transients GRS 1741-2853 and XMM J174457-2850.3

Swift/XRT detects renewed activity of the galactic center X-ray transient AX J1745.6-2901

INTEGRAL spots renewed activity from H1743-322

Swift/XRT observations of the X-ray transients KS1741-293 and XTE J1719-291

Chandra detects activity from the Galactic X-ray transients KS 1741-293, Swift J174535.5-290135.6 and CXOGC J174535.5-290124

Chandra detects Swift J174535.5-290135.6 in a relatively bright state

INTEGRAL Galactic bulge monitoring observations of GRO J1750-27 (AX J1749.1-2639), H1743-322 and SLX 1746-331

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Renewed activity of the very faint X-ray transient CXOGC J174535.5-290124 and continued activity of the neutron-star X-ray transient SAX J1747.0-2853

New INTEGRAL source, IGR J17354-3255, and continuation of the INTEGRAL Galactic Bulge monitoring program

INTEGRAL detects SWIFT J174535.5-290135.6

Swift/XRT detection of a transient source in the Galactic Center

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R. E. Rutledge, Editor-in-Chief  
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rrutledge@astronomerstelegram.org  
dfox@astronomerstelegram.org  
mansi@astronomerstelegram.org