Swift/XRT detects activity of the Galactic center transient GRS 1741-2853

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Swift/XRT detects activity of the Galactic center transient GRS 1741-2853

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Referred to by ATel #: 5332

During regular monitoring observations of the Galactic center with the Swift/XRT (ATel #5006; see link below), we detect a transient X-ray source located ~10 arcmin NW of Sgr A*. It is weakly detected at a 3-sigma level during a ~1.1 ks PC-mode observation performed on 2013 August 1, at a net count rate of ~5E-3 counts/s. Subsequent observations obtained on August 2 (~1.0 ks) show that the source brightened to ~1.5E-2 counts/s. The position of this object is consistent with that of the transient neutron star low-mass X-ray binary and thermonuclear X-ray burster GRS 1741-2853. The Swift observations indicate that this source is entering a new accretion outburst.

Assuming an absorbed power-law model with a photon index of 2 and a hydrogen column density of 1E23 cm-2, the observed XRT count rates translate into 2-10 keV unabsorbed fluxes of ~1E-12 and ~3E-12 erg/cm2/s for August 1 and 2, respectively. For a distance of 7.2 kpc (Trap et al. 2009), the corresponding luminosities are ~6E33 erg/s (August 1) and ~2E34 erg/s (August 2). GRS 1741-2853 has frequently been seen active during the Swift/XRT monitoring campaign of the Galactic center; outbursts were detected in 2006, 2007, 2009 and 2010 (Degenaar & Wijnands 2009, 2010; ATel #2770). These active periods generally have a duration of a few weeks, with typical luminosities in the range of ~1E35-1E36 erg/s (Degenaar & Wijnands 2010).

In addition to GRS 1741-2853, the Swift/XRT observations detect ongoing activity from the transient neutron star low-mass X-ray binary AX J1745.6-2901 (ATels #5222, #5226), and the magnetar SGR J1745-29 (e.g., Kennea et al. 2013).

The Swift Monitoring Campaign website can be found at: http://www.swift-sgra.com

References:
Degenaar & Wijnands 2009, A&A 495, 547
Degenaar & Wijnands 2010, A&A 524, 69

PSR J1745-2900 in the archival data from 2011

Swift/XRT detection of an active X-ray transient near the Galactic center

NuSTAR detection of a transient in outburst north of Sgr A*

Search for pulsed radio emission from PSR J1745-2900 at 1 GHz with the GMRT

Polarisation profiles and rotation measure of PSR J1745-2900 measured at Effelsberg

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.

Detection by Sardinia Radio Telescope of radio pulses at 7 GHz from the Magnetar PSR J1745-2900 in the Galactic center region

Spin-down Measurement of PSR J1745-2900: a New Magnetar

Further radio pulsations from the direction of the NuSTAR 3.76-second X-ray pulsar, and a dispersion measure estimate.

MAXI/GSC detection of an X-ray outburst probably from SAX J1747.0-2853 and Swift followup observation of the Galactic center region

Detection of radio pulsations from the direction of the NuSTAR 3.76 second X-ray pulsar at 8.35 GHz

Swift-BAT monitoring for additional bursts from SGR J1745-29 (Trigger 554491)

Detection of radio pulsations from the direction of the Galactic center Soft Gamma-ray Repeater with Parkes and the GBT

Searches for Dispersed Radio Pulsar Emission from the Sag A* SGR

Chandra localization of the soft gamma repeater in the Galactic Center region

Searches for radio pulsations from the 3.76 second NuSTAR X-ray pulsar in the Galactic centre.

Limits on Radio Frequency Flux Density Changes in Sgr A*

NICT VLBI Observations of Sgr A* at 8 GHz and 2 GHz

NuSTAR discovery of a 3.76 second pulsar in the Sgr A* region

1.3mm CARMA Flux Density for Sgr A*

Continued Swift Monitoring of the Galactic Center Flare

Brightening of Sgr A* at 32 GHz from VLA observations

Possible brightening at 22 GHz of Sgr A*
Swift XRT spectrum of a transient X-ray source at Sgr A*'s position

Swift/BAT detection of an SGR-like flare from near Sgr A*

Ongoing X-ray activity from Sgr A*

Large Flare from Sgr A* Detected by Swift

Swift detects a flare from IGR J16418-4532

Non-detection of flare at 22 GHz of Sgr A* induced by the approaching G2 cloud in February and March 2013

INTEGRAL/JEM-X detects a new outburst of the Rapid Burster (MXB 1730-335)

Transient X-ray burster KS 1741-293 active again

1E 1740.7-2942 (the Great Annihilator) enters a low-intensity state

Swift J174510.8-262411 in the hard intermediate state

MAXI/GSC detects a new outburst from the black hole candidate H 1743-322

Swift observes an outburst from the supergiant fast X-ray transient XTE J1739-30

INTEGRAL detects the recurrent transients XTE J1709-267 and XTE J1739-285 in outburst

Swift observes a new outburst from the SFXT AX J1841.0-0536

Swift observations of a new outburst of the SFXT IGR J17544-2619

Swift observes a new outburst from the Supergiant Fast X-ray Transient AX J1841.0-0536

Swift observes a new outburst from the Supergiant Fast X-ray Transient AX J1845.0-0433

MAXI/GSC detects a quasi-regular outburst and a possible soft state transition in H 1743-322

INTEGRAL Galactic Bulge monitoring: transient activity from KS 1741-293, MXB 1730-335, and IGR J17498-2921

Swift detects an X-ray burst and renewed activity from KS 1741-293

Swift observations of a new outburst of the SFXT IGR J08408-4503

Swift detected outburst of the SFXT IGR J18410-0535/AX1841.0-0536

INTEGRAL non-detection of enhanced Crab flux

INTEGRAL confirms that XTE J1728-295 = IGR J17285-2922

MAXI/GSC detects a re-brightening from the black hole candidate H 1743-322

Swift/XRT detects new outbursts of the galactic center X-ray transients GRS 1741-2853 and XMM J174457-2850.3
MAXI/GSC detects an X-ray outburst of RX J1709.5-2639 (XTE J1709-267)

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

Analysis of Swift data of the June 5 outburst of the SFXT IGR J18410-0535/AX1841.0-0536

A new outburst of the SFXT IGR J08408-4503 observed by Swift

INTEGRAL reports renewed activity from KS 1741-293

 Renewed Activity from H 1743-322 detected by MAXI/GSC

New X-ray Outburst in X1744-361 (A1744-36)

Swift observations of a new outburst of the SFXT IGR J08408-4503

Swift observations of an outburst of the SFXT AX J1845.0-0433/IGR J18450-0435

New X-ray Outburst in X1744-361

Hard X-ray activity from Aquila X-1

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

X-ray outburst from RX J1709-2639

4U 1608-522 in X-ray outburst

Swift/BAT discovers a new galactic transient: SWIFT J1756.9-2508

SAX J2103.5+4545 Continues to be observable with Swift/BAT

Cygnus X-3 re-entering its high-soft state

Long duration outbursts from the two X-ray bursters AX J1745.6-2901 and GRS 1741.9-2853 suggested by XMM-Newton observations

Cygnus X-3 re-enters the low-hard state

Renewed activity of the Galactic center transients Swift J174535.5-290135.6 and GRS 1741.9-2853 as observed with Swift/XRT

Two active X-ray transients in the Galactic Center region as seen by INTEGRAL

Announcement of the Swift/BAT Hard X-ray Transient Monitor

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

INTEGRAL detects SWIFT J174535.5-290135.6

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

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