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**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

ATel #5246; *N. Degenaar, M. T. Reynolds, J. M. Miller (Michigan), R. Wijnands (UvA), J. A. Kennea (PSU) and N. Gehrels (GSFC), on behalf of a larger collaboration*  
on 3 Aug 2013; 01:38 UTCredential Certification: *Nathalie Degenaar (degenaar@umich.edu)*

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

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  $\sim 10$  arcmin NW of Sgr A\*. It is weakly detected at a 3-sigma level during a  $\sim 1.1$  ks PC-mode observation performed on 2013 August 1, at a net count rate of  $\sim 5E-3$  counts/s. Subsequent observations obtained on August 2 ( $\sim 1.0$  ks) show that the source brightened to  $\sim 1.5E-2$  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  $\sim 1E-12$  and  $\sim 3E-12$  erg/cm $^2$ /s for August 1 and 2, respectively. For a distance of 7.2 kpc (Trap et al. 2009), the corresponding luminosities are  $\sim 6E33$  erg/s (August 1) and  $\sim 2E34$  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  $\sim 1E35$ - $1E36$  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  
Kennea et al. 2013, ApJ 770, L24  
Trap et al. 2009, A&A 504, 501

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