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## Swift/XRT discovers a new X-ray transient near the Galactic center: Swift J174535.5-285921

ATel #3472; *N. Degenaar, R. Wijnands (UvA), J. A. Kennea (PSU) and N. Gehrels (GSFC)*

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Monitoring observations of the Galactic center performed with Swift's X-ray Telescope (XRT) reveal a transient X-ray source located  $\sim 1.3'$  NE of Sgr A\*. This object is clearly detected during a 1.0-ks photon counting (PC) mode observation obtained on 2011 July 3, but not in the proceeding 1.0-ks observation performed on 2011 June 30, nor in any previous XRT observations of this region carried out between 2006 and 2011 (Degenaar & Wijnands 2009, A&A 495, 547; 2010, A&A 524, 69). There is no X-ray transient known at this position, although the Swift error circle contains several weak X-ray sources from the Chandra catalogue of Munro et al. (2009, ApJS 181, 110).

The XRT coordinates of the new X-ray transient are R.A. = 17:45:36.00 and Dec. = -28:59:27.9, with an uncertainty of 3.8". The XRT-UVOT enhanced position is:

R.A. (J2000) = 17:45:35.50 (266.39793 deg)

DEC (J2000) = -28:59:21.5 (-28.98931 deg)

with a 90% confidence error of 3.3". Position enhancement is described by Goad et al. (2007, A&A 476, 1401) and Evans et al. (2009, MNRAS 397, 1177).

The new X-ray source, which we designate Swift J174535.5-285921, is detected at an XRT count rate of  $\sim 0.05$  counts s<sup>-1</sup>. The PC-mode spectrum can be described by a simple absorbed powerlaw model with a photon index of 2.1  $\pm$  1.0 and a hydrogen column density of (9.0  $\pm$  5.0)E22 cm<sup>-2</sup>. The resulting absorbed and unabsorbed fluxes in the 2-10 keV energy range are  $\sim 9.6$ E-12 and 1.9E-11 erg cm<sup>-2</sup> s<sup>-1</sup>, respectively. For a

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distance of 8 kpc, the latter would translate into a 2-10 keV luminosity of  $\sim 1.5E35$  erg s<sup>-1</sup>.

Swift monitoring observations of the Galactic center are continuing. The reported analysis was performed utilizing the tools described in Evans et al. (2009).

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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
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
3529	IR counterpart candidates to the transient Swift J174535.5-285921 - UPDATE
3525	Chandra Localization of the Galactic Center X-ray Transient Swift J174535.5-285921
3508	The Galactic center transient Swift J174535.5-285921 has returned to quiescence
3481	IR counterpart candidates to the transient Swift J174535.5-285921
3476	Search for an IR counterpart to the newly discovered 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](#) ]

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