Swift/XRT detects renewed activity of the Galactic center transient CXOGC J174540.0-290005
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Swift/XRT detects renewed activity of the Galactic center transient CXOGC J174540.0-290005

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In our daily Swift/XRT monitoring observations of the Galactic center (Degenaar et al. 2015, JHEAp, 7, 137) we detect X-ray activity of a transient source located ~20" to the north of Sgr A*, at a position consistent with that of the known X-ray transient CXOGC J174540.0-290005/Swift J174540.2-290005. It is first clearly seen during a 1-ks pointing performed on March 6 and continued to be detected over the past 10 days.

The source is detected at a roughly constant count rate of ~1E-2 c/s and we therefore extracted an average spectrum from the 10 XRT/PC-mode observations of March 6-16. This spectral data can be described by an absorbed power-law model with a hydrogen column density of N_H = (2.5 +/- 1.2)E23 cm^-2, and an index of 3.3 +/- 1.3. The inferred unabsorbed 2-10 keV flux is (1.9 +/- 1.5)E-11 erg/cm2/s, which translates into a luminosity of (1.5 +/- 1.1)E35 erg/s at a distance of 8 kpc.

CXOGC J174540.0-290005 exhibited at least two previous outbursts; in 2003 (Muno et al. 2005, ApJ 622, L113) and in 2006 (ATel #920). In 2003, the source was found active during a single Chandra observation, when it was detected at a 2-10 keV luminosity of ~3E34 erg/s. During its 2006 outburst, the Galactic center was monitored daily with Swift/XRT and this showed that the source remained active for ~2 weeks, reaching a peak luminosity of ~2E35 erg/s (Degenaar & Wijnands 2009, A&A 495, 547). Its current level of activity is thus similar to that observed with Swift/XRT during its 2006 outburst.

The results of our daily Swift/XRT monitoring campaign of the Galactic center can be found at http://www.swift-sgra.com
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