The Galactic center transient Swift J174535.5-285921 has returned to quiescence

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*on **25 Jul 2011; 11:55 UT***
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We report on continued Swift monitoring observations of the Galactic center, covering the field of the new transient X-ray source Swift J174535.5-285921 (ATel #3472,#3476,#3481). After the first detection on 2011 July 3 (ATel #3472), the source was detected with the X-ray telescope (XRT) on July 6, 8 and 9 at count rates of ~(2-5)E-2 counts s-1. Swift J174535.5-285921 is no longer detected in subsequent observations carried out between July 15-17, yielding a count rate upper limit of ~5E-3 counts s-1. This suggests that the source returned to quiescence after an X-ray outburst that had a duration between 7-15 days. During continuing observations carried out on July 21, an excess of photons appears at the source position, corresponding to a count rate of ~1E-2 counts s-1, which might indicate some residual activity. On July 24, however, there is again no sign of X-ray activity from Swift J174535.5-285921.

We utilized the tools described in Evans et al. (2009) to extract a summed X-ray spectrum of Swift J174535.5-285921 during its active phase (using total exposure time of ~4.1 ks). The XRT data can be described by an absorbed powerlaw with an index of 1.4 +/- 1.0 and a hydrogen column density of (5.7 +/- 5.0)E22 cm-2. The average 2-10 keV absorbed and unabsorbed source fluxes measured between 2011 July 3-9 are (8.7 +/- 1.6)E-12 and (1.2 +/- 0.4)E-11 erg cm-2 s-1, respectively. For an assumed source distance of 8 kpc, the latter implies an average 2-10 keV outburst luminosity of ~9E34 erg s-1. Using these spectral parameters and a distance of 8 kpc, we estimate an upper limit on the 2-10 keV source luminosity of <6E33 erg s-1 between July 15-17 (for an accumulated exposure time of ~2.5 ks). The tentative weak detection during the 1.0-ks exposure of July 21 would imply a 2-10 keV source luminosity of ~1E34 erg s-1.

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