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Swift resumes X-ray monitoring observations of the Galactic center after Sun constraints

ATel #14378; *N. Degenaar, R. Wijnands (University of Amsterdam), M. T. Reynolds, J. M. Miller (University of Michigan), J. A. Kennea (Penn State University), on behalf of a larger collaboration*

on 8 Feb 2021; 15:06 UT

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

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Starting on 2021 February 4, Swift resumed its X-ray monitoring campaign of the Galactic center during which daily 1.0-ks exposures are obtained (see Degenaar et al. 2015 for a description of the program). The $\sim 20 \times 20$ arcmin region around Sgr A* that is covered by our campaign currently does not contain any active X-ray transients. For a distance of 8 kpc, the sensitivity limit of our daily ~ 1 -ks XRT exposures convert to an approximate luminosity of $\sim 1E34$ erg/s.

In the last observation before the Sun-constrained window, performed on 2020 November 2, there was one transient active: the neutron star low-mass X-ray binary (LMXB) AX J1745.6-2901. This source had entered an outburst in 2019 September (ATel #13150) and remained active since (see ATels #13683 and #13839). Its long outburst must have thus ended between November 2 and February 4.

We also report that the transient neutron star LMXB GRS 1741-2853 returned to quiescence just before the Sun-constrained window. It was last detected in the observation performed on 2020 October 26. This outburst had started around 2020 April 25 (ATel #13683) and thus had a duration of 6 months. Since the beginning of our program in 2006, numerous outbursts of this source have been detected (e.g., Degenaar & Wijnands 2009, 2010, 2014; Degenaar et al., 2015; ATels #8881, #10859), but typically these lasted only for 20-40 days. The 2020 outburst is thus by far the longest one that has been observed for this source over the past 15 years.

Quick-look results of our daily Swift/XRT observations of the Galactic center are immediately posted at the [Swift Sgr A* Monitoring Campaign Website](#).

References:

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