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Publication date

2018

Document Version

Final published version

Published in

The astronomer's telegram

License

Unspecified

[Link to publication](#)

Citation for published version (APA):

Sanchez-Fernandez, C., Ferrigno, C., Chenevez, J., Kuulkers, E., Wijnands, R., Bazzano, A., Jonker, P., Del Santo, M., & INTEGRAL Galactic bulge monitoring team (2018). INTEGRAL detects a rebrightening of the accreting millisecond X-ray pulsar IGR J17591-2342. *The astronomer's telegram*, 2000. <http://www.astronomerstelegram.org/?read=12000>

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INTEGRAL detects a rebrightening of the accreting millisecond X-ray pulsar IGR J17591-2342

ATel #12000; *C. Sanchez-Fernandez (ESAC, ESA), C. Ferrigno, J. Chenevez, E. Kuulkers, R. Wijnands, A. Bazzano, P. Jonker, M. Del Santo, on behalf of the INTEGRAL Galactic bulge monitoring team*

on 1 Sep 2018; 11:24 UT

Credential Certification: *Celia Sanchez-Fernandez (celia.sanchez@sciops.esa.int)*

Subjects: X-ray, Gamma Ray, Binary, Neutron Star, Transient, Pulsar

Referred to by ATel #: [12004](#)

IGR J17591-2342 was discovered by INTEGRAL on August 11, 2018 (ATel #11941). The outburst had actually started on July 22, 2018 (ATel #11981) and reached its peak on July 25, with a flux of ~50mCrab in the Swift/BAT energy range (15-150 keV). Since then, the outburst smoothly decayed to lower flux values, being detected at a flux of 3 mCrab by NICER (2-10 keV) on August 15th (ATel #11957). During observations of the Galactic Bulge region between August 30, 21:10 and August 31, 00:52 (UT), a significant rebrightening of the source has been detected by IBIS/ISGRI. The flux estimated from the mosaic image is ~33 mCrab in the 20-40 keV energy range. The source is barely at the edge of the JEMX field of view. We derive 3-sigma upper limits of ~20 mCrab (3-10 keV) and ~40 mCrab (10-25 keV) in the JEM-X mosaics. The IBIS/ISGRI spectrum can be fit with a powerlaw model with spectral index 2, showing no significant spectral variations when compared to the IBIS/ISGRI spectrum of the system measured on August 11. INTEGRAL will be observing the region around this source until September 4th. We encourage observations at other wavelengths.

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