A new X-ray transient, IGR J17451-3022, discovered by INTEGRAL/JEM-X near the Galactic Centre - DTU Orbit (28/07/2019)

The JEM-X twin X-ray monitors on board the INTEGRAL satellite has detected a new X-ray transient during recent observations of the Galactic Centre and Bulge regions. The new source named IGR J17451-3022 has the following coordinates:

- R.A. = 266.27
- Dec. = -30.38

with a 2arcmin 90% confidence radius.

The source appeared in JEM-X 3-10 keV mosaic images obtained from the observation of the Galactic Bulge region and Galactic Center performed during INTEGRAL revolution 1448 between 2014 August 22 UTC 20:40 and August 24 UTC 07:16. It has since been detected at about the same constant level during subsequent INTEGRAL observations in revolutions 1449 (August 27 UTC 07:51 - August 28 UTC 04:38), 1450 (August 28 UTC 20:09 - August 31 UTC 07:02), and 1451 (August 31 UTC 19:50 - September 3 UTC 03:07). It was not detected during previous observations of the region taken on August 18 and 19 leading to a 3-10 keV flux upper limit of 3 mCrab.

We measure an average flux of 7 ±1 mCrab with only slight variations between 5 and 8 mCrab during the different above-mentioned observations. The source is not visible above 10 keV, leading to an upper limit of 1 mCrab between 10-25 keV. No significant time variation is seen in the source light-curve.

INTEGRAL will observe the Galactic Center region again between September 6 UTC 19:18 and September 8 UTC 20:31.

A 2-ksec target of opportunity with the Swift satellite has been executed on September 5 between UTC 15:27 and 18:32. The new INTEGRAL source is found with the XRT instrument, only 26 arcsec from the JEM-X position, at the enhanced position:

- R.A. = 266.27824
- Dec. = -30.37876

with a 90% error confidence of 2.1 arcsec.

Further analysis of the Swift data is on-going. We thank the Swift team for having performed this observation of the new transient source.

Multi-wavelength follow-up observations are encouraged to unveil the nature of IGR J17451-3022.

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