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1ES 0033+595 found in a very high state by INTEGRAL

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Published in:

The Astronomer's Telegram : ATel

Publication date:

2014

Document Version

Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

Citation (APA):

Bassani, L., Malizia, A., Chenevez, J., Fiocchi, M., Bazzano, A., Ubertini, P., ... Bird, A. J. (2014). 1ES 0033+595 found in a very high state by INTEGRAL. The Astronomer's Telegram : ATel, (ATel #6781).

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1ES 0033+595 found in a very high state by INTEGRAL

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on 4 Dec 2014; 14:15 UT

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Subjects: X-ray, AGN, Blazar

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During recent Galactic Plane Scan survey observations (GPS, PI: A. Bazzano) performed between Dec 2, 2014 (08:47 UTC) and Dec 3, 2014 (00:26 UTC), INTEGRAL detected 1ES 0033+595 with both JEM-X and IBIS/ISGRI instruments. 1ES 0033+595 is a blazar near the Galactic plane belonging to the BL Lac type; the source has recently been reported as one of the 50 or so blazars detected at TeV energies (Aleksic et al. 2014, <http://arxiv.org/abs/1410.7059v1>). 1ES 0033+595 was found in the combined JMX1+2 mosaic (effective exposure of 3.1 ksec, 3-10 keV band) with a flux of 20 ± 2 mCrab (3.4×10^{-10} erg/cm²/s) corresponding to a 10 sigma significance. It is also detected at higher energies ((in JEM-X2 only), with a flux of 21 ± 5 mCrab (or 2.5×10^{-10} erg/cm²/s) at 4 sigma level (effective exposure of 1.2 ksec, 10-25 keV band). At even higher energies, IBIS/ISGRI found 1ES 0033+595 at a flux level of 13.6 ± 2 mCrab (10^{-10} erg/cm²/s) in the 18-40 keV band (13 sec, about 7 sigma) while a 3 sigma upper limit of 11 mCrab (10^{-10} erg/cm²/s) is provided in the 40-100 keV band.

Using data collected from the ASDC SED Builder tool (<http://tools.asdc.asi.it/SED/>) we notice that this is the highest X-ray flux so far reported for this BL Lac object. The source is routinely monitored by various instruments including the Swift/XRT telescope: an observation performed on Nov 23 2014 gives a 2-10 keV flux around 10^{-10} erg/cm²/s indicating that 1ES0033+595 has been in a high flux state for sometime now. Multiwaveband observations of the source are strongly encouraged.

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