



## 1E 1740.7-2942 (the Great Annihilator) enters a low-intensity state

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*Total number of authors:*  
20

*Publication date:*  
2012

*Document Version*  
Publisher's PDF, also known as Version of record

[Link back to DTU Orbit](#)

### *Citation (APA):*

Kuulkers, E., Ferrigno, C., Del Santo, M., Bazzano, A., Alfonso-Garzon, J., Beckmann, V., Bird, J., Brandt, S., Chenevez, J., Courvoisier, T. J.-L., Domingo, A., Eibsawa, K., Jonker, P. G., Kretschmar, P., Markwardt, C. B., Oosterbroek, T., Paizis, A., Pottschmidt, K., Sanchez-Fernandez, C., & Wijnands, R. (2012, Oct 9). 1E 1740.7-2942 (the Great Annihilator) enters a low-intensity state. The Astronomer's telegram No. ATel #4471 <http://www.astronomerstelegam.org/?read=4471>

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ATel #4471; [E. Kuulkers \(ESA/ESAC\), C. Ferrigno \(ISDC\), M. Del Santo, A. Bazzano \(INAF/IAPS Rome\), J. Alfonso-Garzon \(CAB/INTA-CSIC\), V. Beckmann \(APC\), A. J. Bird \(U. of Southampton\), S. Brandt, J. Chenevez \(DTU Space\), T. J.-L. Courvoisier \(ISDC\), A. Domingo \(CAB/INTA-CSIC\), K. Ebisawa \(JAXA/ISAS\), P. G. Jonker \(SRON/CfA/RU\), P. Kretschmar \(ESA/ESAC\), C. B. Markwardt \(NASA/GSFC\), T. Oosterbroek \(ESA/ESTEC\), A. Paizis \(INAF/IASF Milan\), K. Pottschmidt \(CRESST-UMBC/NASA-GSFC\), C. Sanchez-Fernandez \(ESA/ESAC\) & R. Wijnands \(U. of Amsterdam\)](#)

*on 9 Oct 2012; 21:35 UT*

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Subjects: X-ray, Binary, Black Hole, Variables

INTEGRAL has been monitoring the Galactic center region since the beginning of August 2012 during the Galactic bulge (GB) monitoring program (see ATel #[438](#)), the Target of Opportunity observations of Swift J174510.8-262411 (see ATel #[4450](#)), as well as during other observing programs.

During the GB monitoring observations taken on UT 2012 October 6, 16:15-21:01, the flux of the black-hole candidate 1E 1740.7-2942, also known as the Great Annihilator, was below the GB monitoring detection limits of both ISGRI (~11 mCrab, 3 sigma, 18-40 keV) and JEM-X (~6 mCrab, 3 sigma, 3-10 keV).

Analysis of the available INTEGRAL data of the region from August 31 to October 8 shows that the intensity averaged over an INTEGRAL satellite orbit (~3 days) has been declining from 47 +/- 1 (53 +/- 2) mCrab to 14 +/- 2 (13 +/- 2) mCrab in the 20-40 (40-80) keV band. The Swift/BAT 15-50 keV Hard X-ray Transient Monitor results confirm these findings. Over the same period, the intensity in the 3-10 (10-20 keV) band declined more erratically from 13 +/- 2 (25 +/- 3) mCrab to 9 +/- 3 (4 +/- 4) mCrab. The source clearly softened over the above time period.

Such low-intensity states are not uncommon in this system, and, over the last decade, have occurred in 2002 (ATel #[94](#)), 2004 (ATel #[257](#), Del Santo et al. 2005, A&A 433, 613), 2006 and 2007 (see [http://integral.esac.esa.int/BULGE/SOURCES/1E\\_1740.7-2942/1E\\_1740.7-2942.html](http://integral.esac.esa.int/BULGE/SOURCES/1E_1740.7-2942/1E_1740.7-2942.html) : INTEGRAL, <http://swift.gsfc.nasa.gov/docs/swift/results/transient/weak/1E1740.7-2942/> : Swift/BAT). They can last for months.

We encourage observations at all wavelengths. Swift observations have been requested and approved.