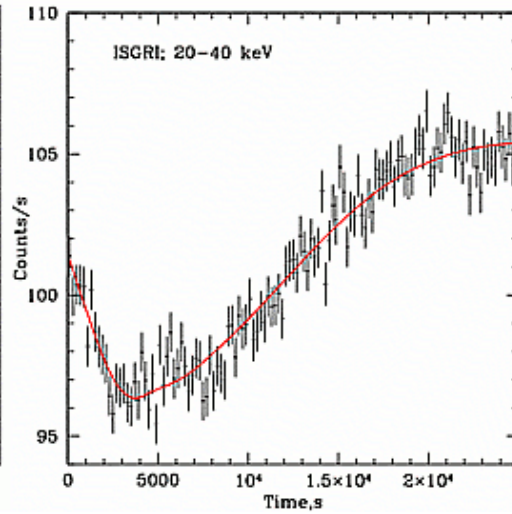
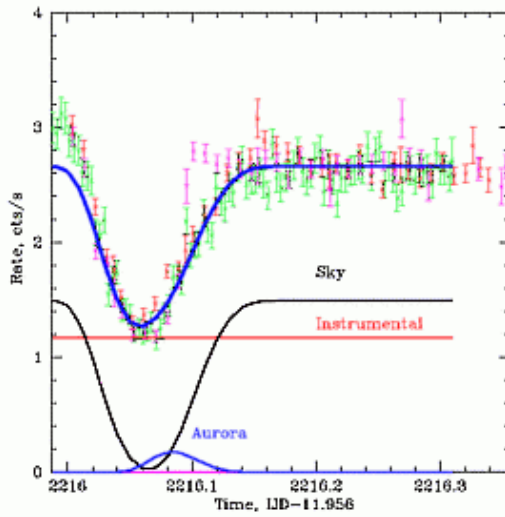
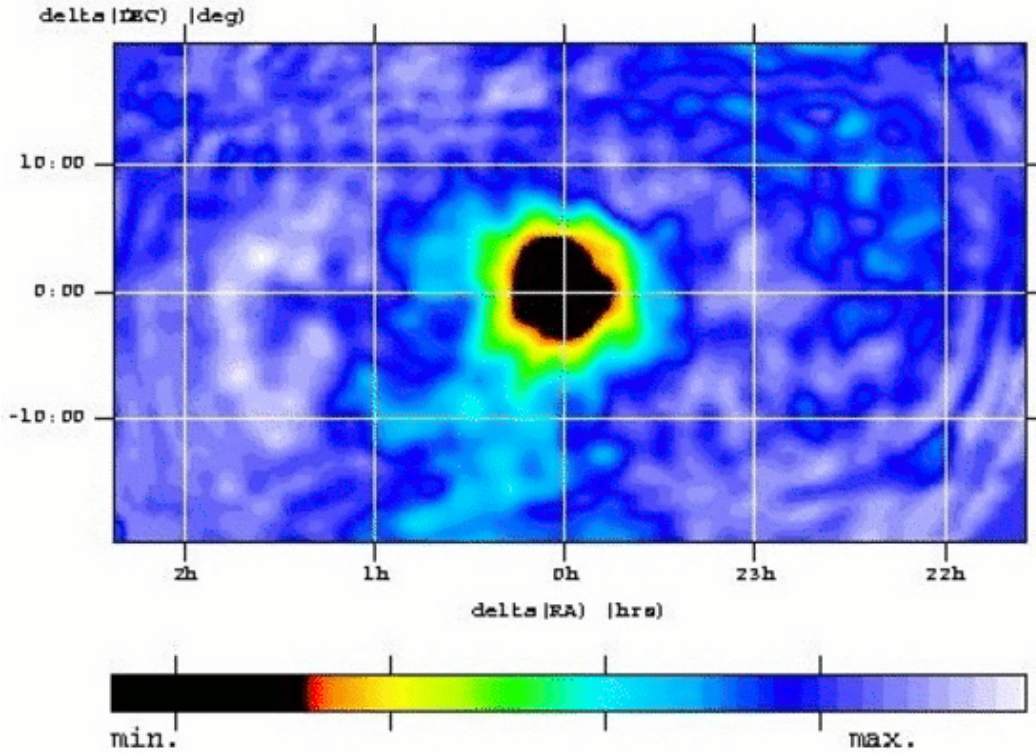


INTEGRAL Picture of the Month

March 2006



INTEGRAL observes the Earth

At the end of January and the beginning of February 2006 [INTEGRAL observed the Earth](#). The goal of the observation was to measure the cosmic high energy background by using the Earth as a blocking device and measuring the change in flux while part of the field of view was covered by it.

This is by no means a standard observation and therefore a lot of special operations were needed for the planning of these observations from ISOC, MOC and the instrument teams.

Since it is impossible to steer the satellite while the illuminated part of the Earth blinds the star trackers, INTEGRAL was pointed at a stationary position in the sky and the Earth drifted through the field of view of the instruments.

The picture shows at the top the image as obtained with the SPI instrument (2.5 deg angular resolution) between 25 and 50 keV. The earth stands out as a dark "hole" in the middle of the image.

At the bottom left a light curve obtained with the JEM-X instrument in the energy range 3-5 keV for one of the observations is displayed together with various model contributions (sky background, instrumental background and a small contribution from the Earth's aurora) which altogether describe the observed light curve quite well.

At the bottom right a similar light curve obtained with the ISGRI instrument in the range 20-40 keV is shown, presenting a similar but not identical profile as at lower energies.

Work is ongoing to analyze this unusual observation.

Credits: A. Neronov (ISDC, Geneva); E. Churazov (IKI, Moscow); J.-P. Roques (SPI team); F. Lebrun, P. Ubertini (IBIS team); N. Lund (JEM-X team)

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