

The Galactic Centre Region

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In an article to be published in the *Astrophysical Journal*, Belanger et al. present the results of a detailed analysis of approximately 1900 hours of observations of the galactic centre, obtained with Integral since the launch of the spacecraft in October 2002.

The IBIS/ISGRI imager on the Integral observatory detected for the first time a hard X-ray source, IGRJ17456–2901, located within 1 arcminute of Sagittarius A* (Sgr A* - the black hole residing at the centre of our Galaxy) over the energy range 20–100 keV.

Two years and an effective exposure of 4.7×10^6 s have allowed for obtaining more stringent positional constraints on this high-energy source and the construction of its spectrum in the energy range 20–400 keV.

This central source near Sgr A* appears not to be a point source as previously thought, but likely is a diffuse, but compact, source. The observations by Belanger et al. also show that the source is faint, but persistent with no detected variability.

The galactic centre as observed with IBIS/ISGRI onboard INTEGRAL. The image covers a region of about $2.5^\circ \times 1.5^\circ$. Credits: G. Belanger (CEA Saclay) et al.

By combining the ISGRI spectrum together with the total X-ray spectrum corresponding to the same physical region around Sgr A* from XMM-Newton data, and collected during part of the gamma-ray

observations, Belanger et al. have also constructed the first accurate wide band high-energy spectrum for the central arcminutes of the Galaxy. These findings are also presented in the upcoming publication (see also 'Belanger et al. 2005').

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