

Bursts detected in hard X-rays by the IBIS telescope onboard the INTEGRAL observatory in 2003-2007

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All observations performed with the IBIS telescope onboard the INTEGRAL observatory during the first four years of its in-orbit operation have been analyzed to find X-ray bursts. The time history of the IBIS/ISGRI total count rate in the energy range 15–25 keV revealed several hundreds of bursts of 5–500 s duration with a high statistical significance (over the entire period of observations, only one event could be detected by chance with a probability of 20%). In addition to the events associated with cosmic gamma-ray bursts (detected in the field of view or passed through the IBIS shield), solar flares, and the activity of the soft gamma repeater SGR 1806–20, we were able to localize more than 400 bursts and, with three exceptions, to identify them with previously known persistent or transient X-ray sources (over 300 were identified with known X-ray bursters). The three exceptions were: a burst from a new burster in a low state that got the name of IGR J17364–2711; GRB 060428C; a burst from AXJ 1754.2–2754, which allowed us to identify this source as an X-ray burster. Curiously enough, around 200 bursts were detected from one X-ray burster, GX 354-0. The statistical distributions of bursts in duration, maximum flux, and recurrence time have been analyzed for this source. Some of the bursts observed with the IBIS/ISGRI telescope were also detected by the JEM-X telescope onboard the INTEGRAL observatory in the standard X-ray energy range of 3–20 keV.