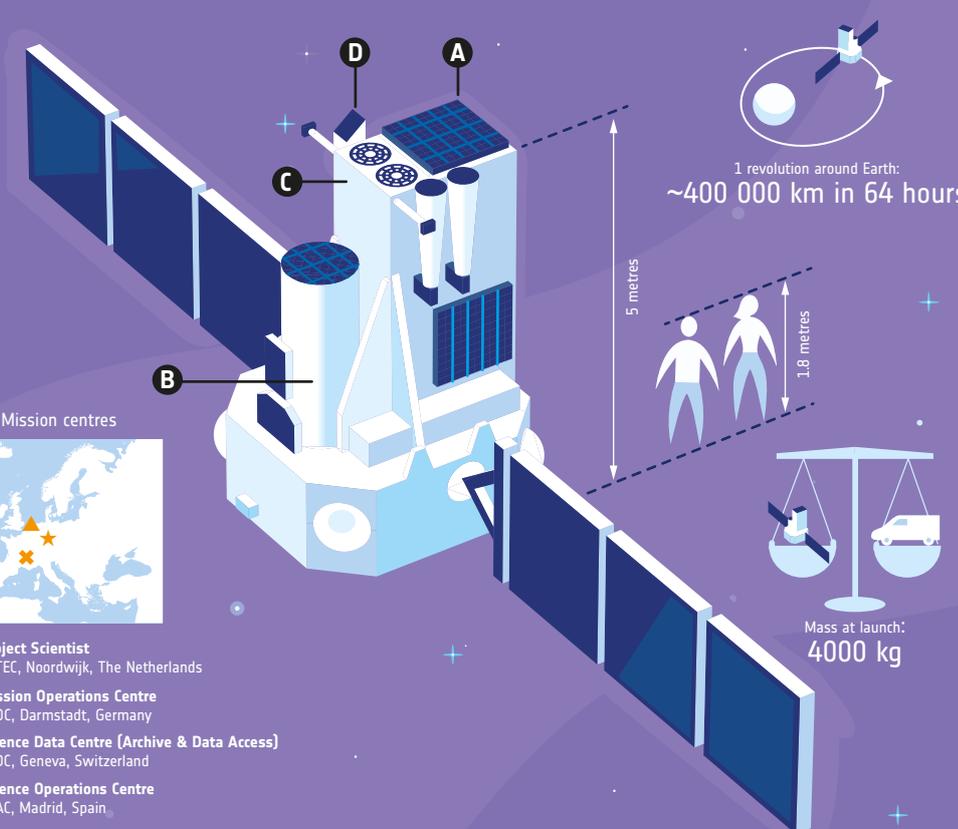
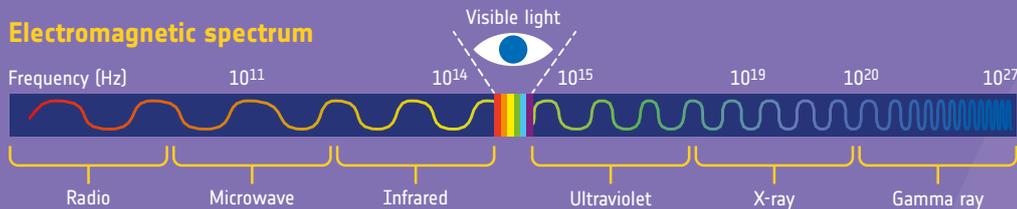


integral CELEBRATING FIFTEEN YEARS IN SPACE



ESA's International Gamma-Ray Astrophysics Laboratory, INTEGRAL, detects some of the most energetic radiation that comes from space. Since launch on 17 October 2002, it has been observing the ever-changing, powerful and violent cosmos. It is equipped with two gamma-ray telescopes, an X-ray monitor, and an optical camera. All four of these instruments point simultaneously at the same region of the sky to make complementary observations of high-energy sources. By revealing both the diffuse emission from our Galaxy, the Milky Way, and the population of individual sources that shine brightly at these energies in our Galaxy and beyond, INTEGRAL has broadened our understanding of several classes of astronomical objects and events across the Universe.

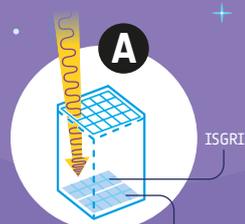
Electromagnetic spectrum



Mission centres

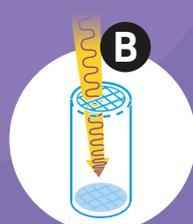


- Project Scientist**
ESTEC, Noordwijk, The Netherlands
- Mission Operations Centre**
ESOC, Darmstadt, Germany
- Science Data Centre (Archive & Data Access)**
ISDC, Geneva, Switzerland
- Science Operations Centre**
ESAC, Madrid, Spain



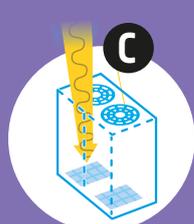
IBIS (Imager)

is a coded aperture gamma-ray instrument that provides a wide field of view (maximum about 29°x29°) with fine imaging, source identification and spectral capabilities.



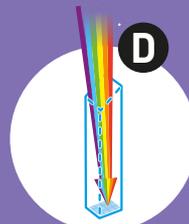
SPI (Spectrometer)

performs spectral analysis of gamma-ray point sources and extended regions over a wide field of view similar to IBIS. It measures gamma-ray energies with exceptional precision.



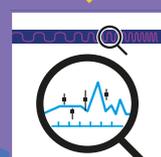
JEM-X (X-ray monitor)

plays a crucial role in the X-ray detection and identification of the gamma-ray sources. It provides X-ray images with a field of view about 5 times smaller than that of IBIS and SPI.



OMC (Optical monitor)

observes the optical emission from the prime targets of the main gamma-ray instruments (IBIS and SPI) and JEM-X.



- 20-08-2017
800 million km
- 17-08-2017
Detection of GW170817/GRB170817A: first gravitational wave event coincident with a gamma-ray burst
- March 2016
- 10-11-2015
700 million km
- 21-01-2014
First detection of ⁵⁶Ni and ⁵⁶Co in a Type I supernova, SN 2014J
- 26-06-2015
Brightest INTEGRAL source observed: V404 Cyg
- 10-01-2014
600 million km
- 01-02-2012
500 million km
- 15-12-2012
Discovery of ⁴⁴Ti emission lines from supernova SN 1987A in the Large Magellanic Cloud
- 18-05-2010
Most distant INTEGRAL source detected: gamma-ray burst GRB 100518A
- 15-02-2010
400 million km
- December 2009
- 02-04-2008
300 million km
- 18-10-2008
Polarized gamma-ray emission from the Crab Nebula
- May 2007
- 11-06-2006
200 million km
- 18-08-2004
100 million km
- January 2006
- April 2004
- 29-01-2003
First INTEGRAL source discovered: IGR J16318-4848
- 17-10-2002
INTEGRAL launched on a Proton rocket

Legend:
 = New IBIS survey catalogue
 = Accumulated distance