

Science with the International Gamma-Ray Astrophysics Laboratory INTEGRAL

Christoph Winkler (ESA-ESTEC), on behalf of the INTEGRAL Science Working Team

The International Gamma-Ray Astrophysics Laboratory (INTEGRAL), to be launched in two years, is dedicated to the fine spectroscopy (ΔE : 2 keV FWHM @ 1.3 MeV) and fine imaging (angular resolution: 12' FWHM) of celestial gamma-ray sources in the energy range 15 keV to 10 MeV with concurrent source monitoring in the X-ray (3 - 35 keV) and optical (V, 550 nm) range. The mission is conceived as an observatory led by ESA with contributions from Russia and NASA. The INTEGRAL observatory will provide to the science community at large an unprecedented combination of imaging and spectroscopy over a wide range of gamma-ray energies. This paper summarises the key scientific goals of the mission, the current development status of the payload and spacecraft and it will give an overview of the science ground segment including the science data centre, science operations and key elements of the observing programme.