CTA at the Department of Astronomy of UNIGE

A local history of high-energy astrophysics

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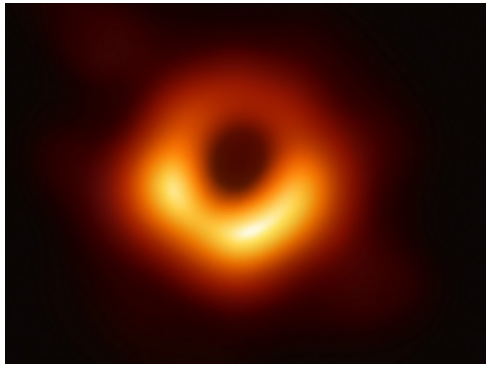
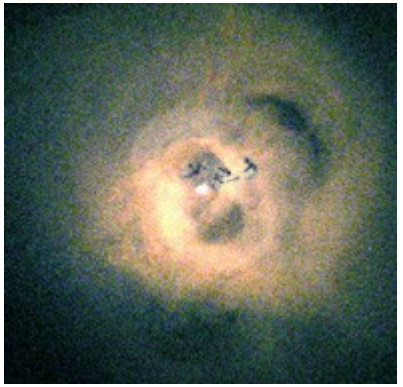
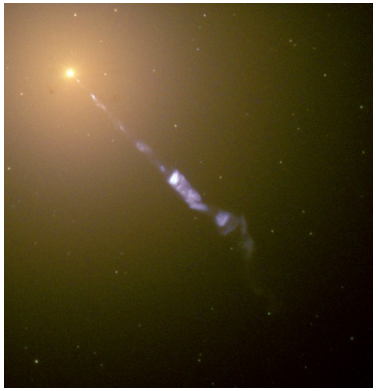
High-energy astrophysics: Extreme physics in the Universe



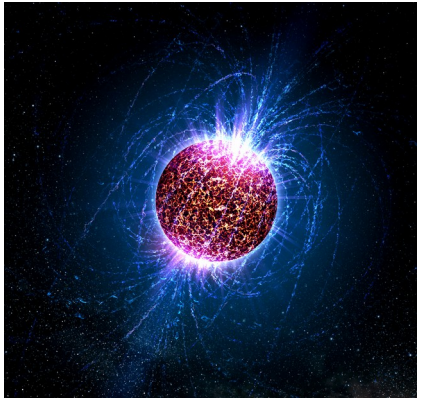
Black holes



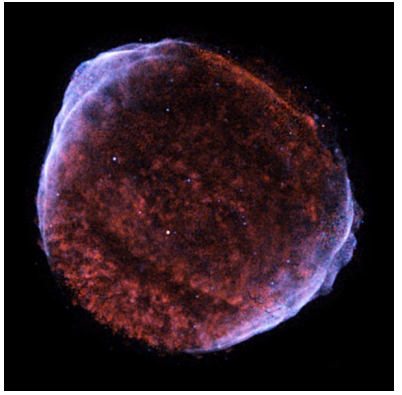
Hot plasma



Particle acceleration

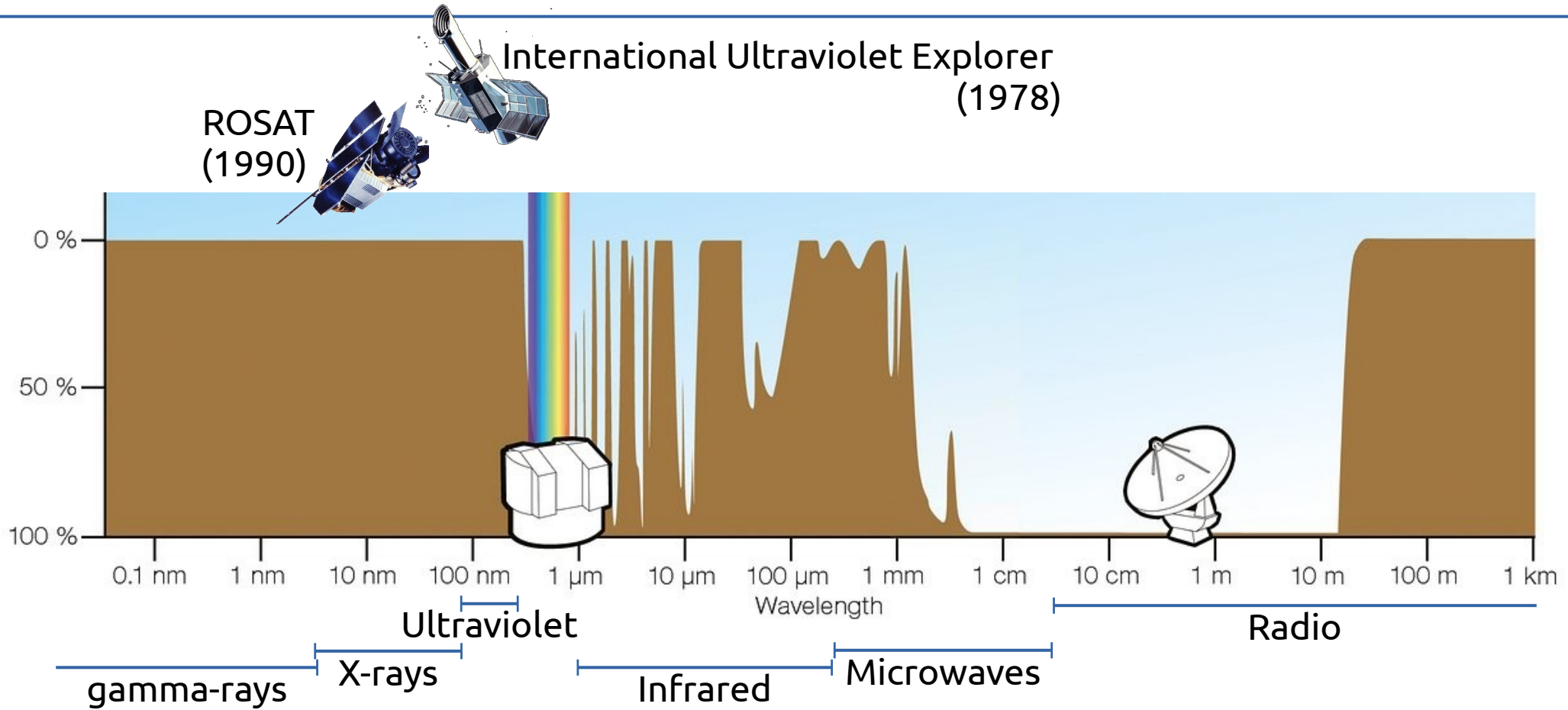


Neutron star – Not an actual image!



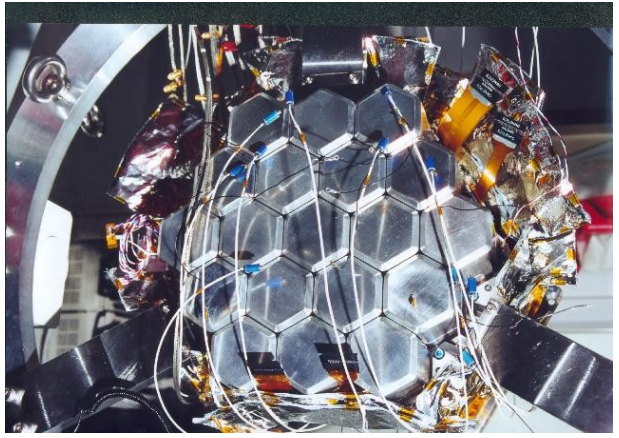
Shocks

The need for space



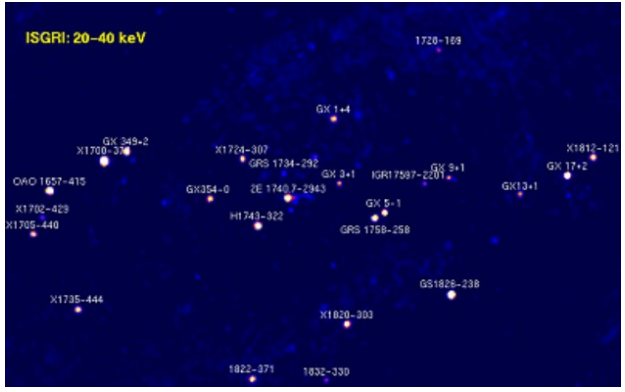
INTEGRAL

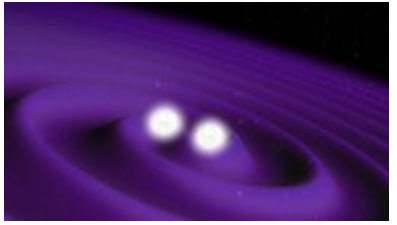
X- and gamma-ray observatory of the European Space Agency (2002)

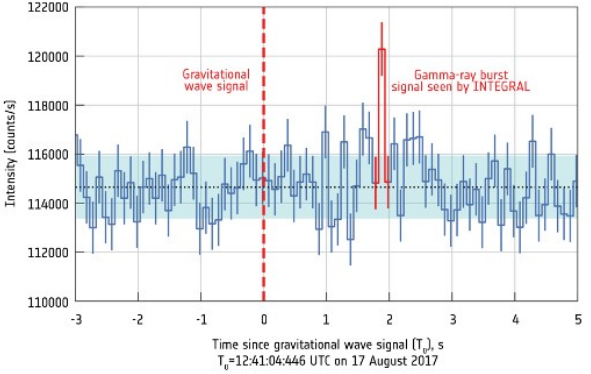


SPI

Some INTEGRAL highlights





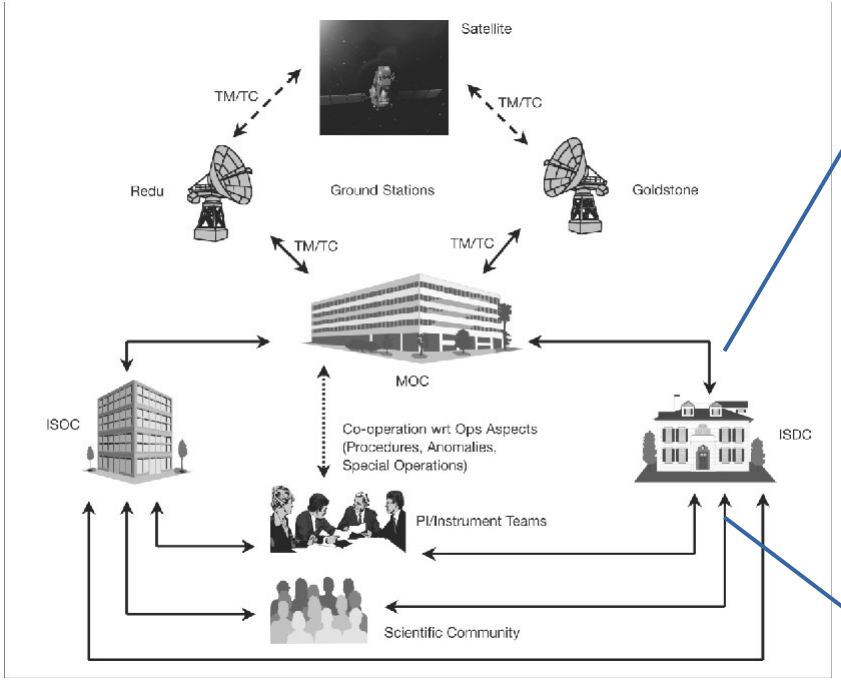


Compact objects

Transient universe

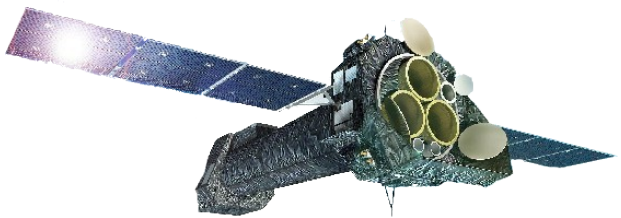
Multi-messenger astronomy

The INTEGRAL Science Data Centre



Established in 1995 by Prof. T. Courvoisier

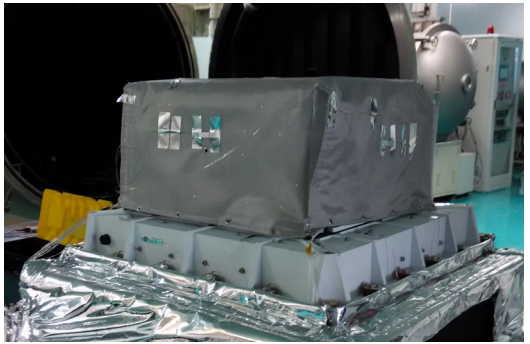
Space program beyond INTEGRAL



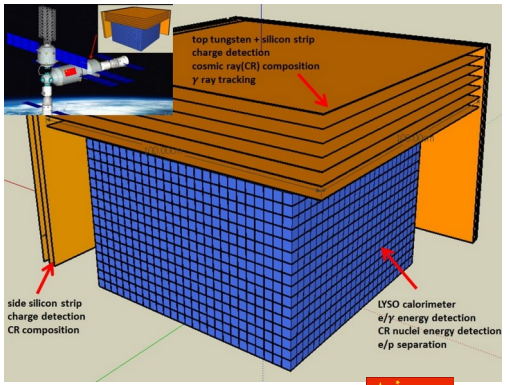
XMM-Newton

XRISM

eXTP



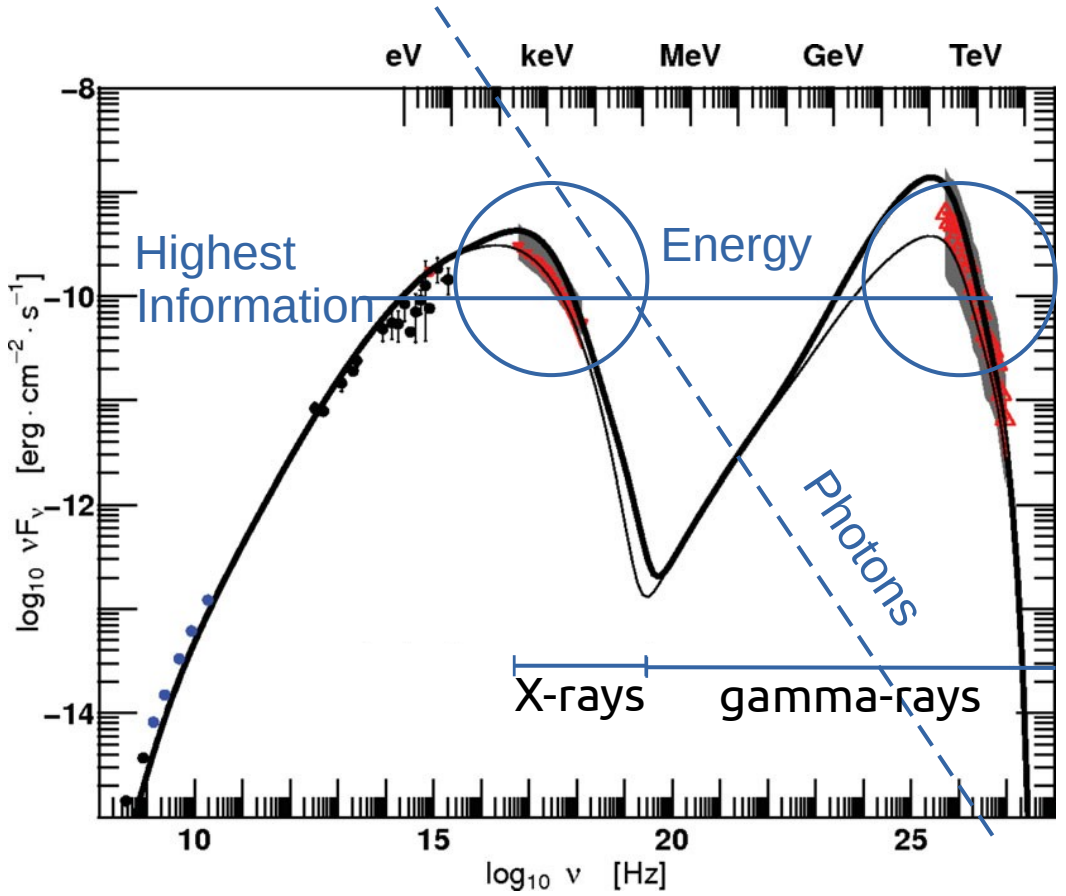
Polar – Polar 2



HERD

with DPNC
at UNIGE

Spectral energy distribution of high-energy sources



Highest energy phenomena

Blazar
PKS 2155-304

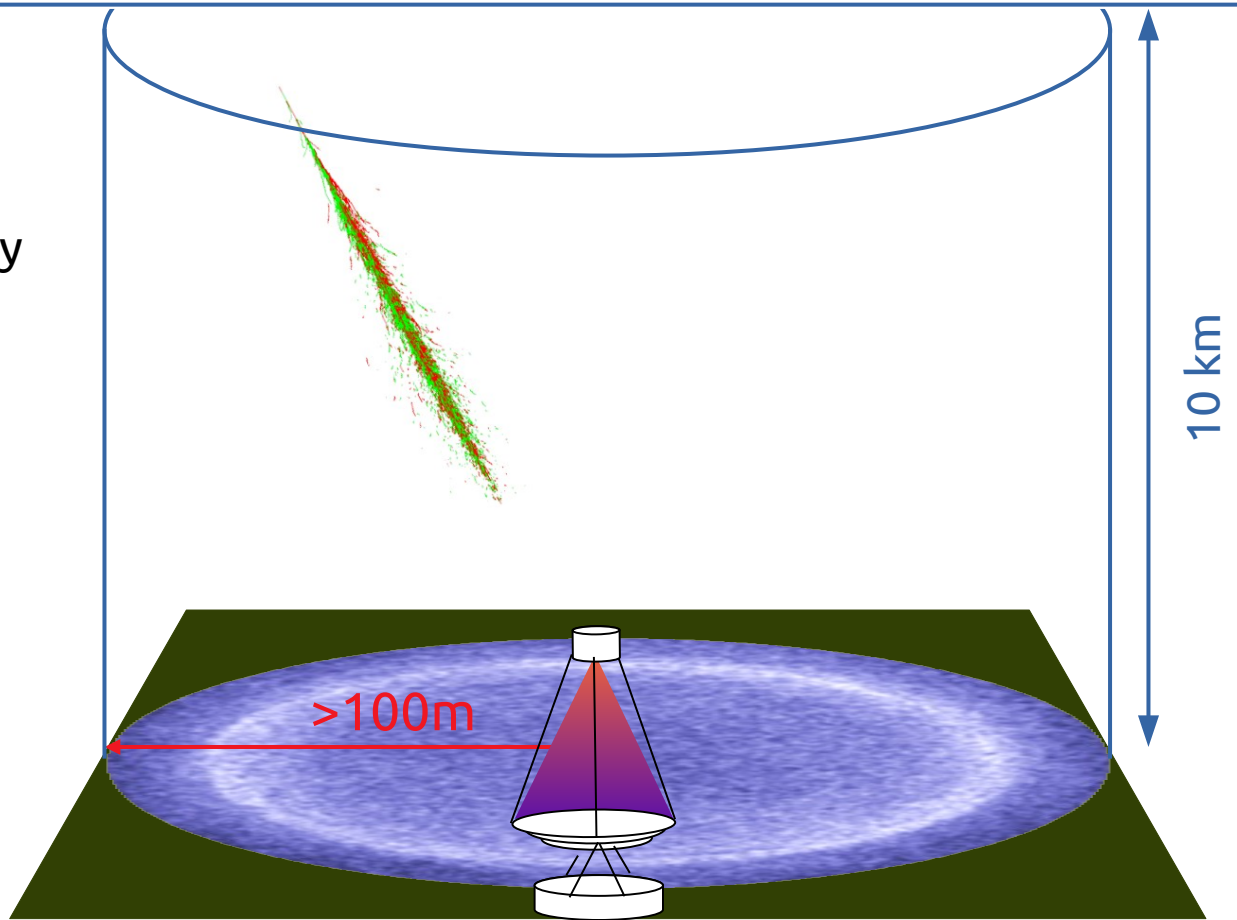
The collecting area problem

Photon flux decreases very rapidly with energy

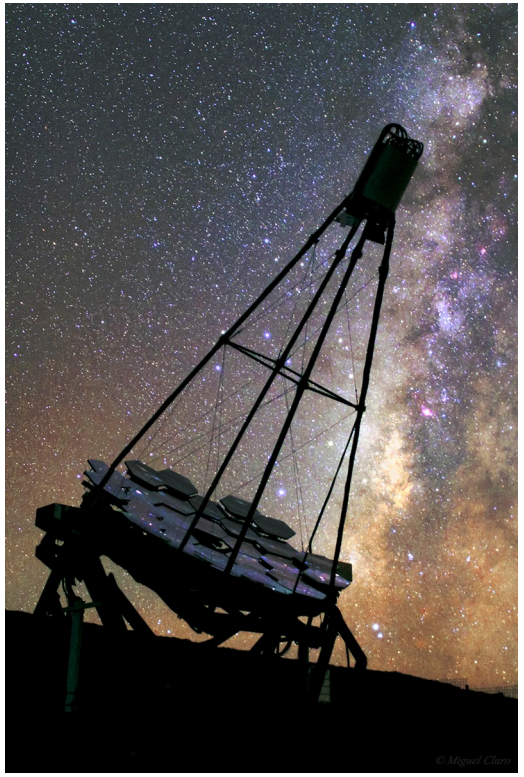
Enormous areas of detectors are necessary!

Fortunately, the atmosphere can acts as a detector

Cherenkov telescopes



Gamma-ray astronomy from the ground

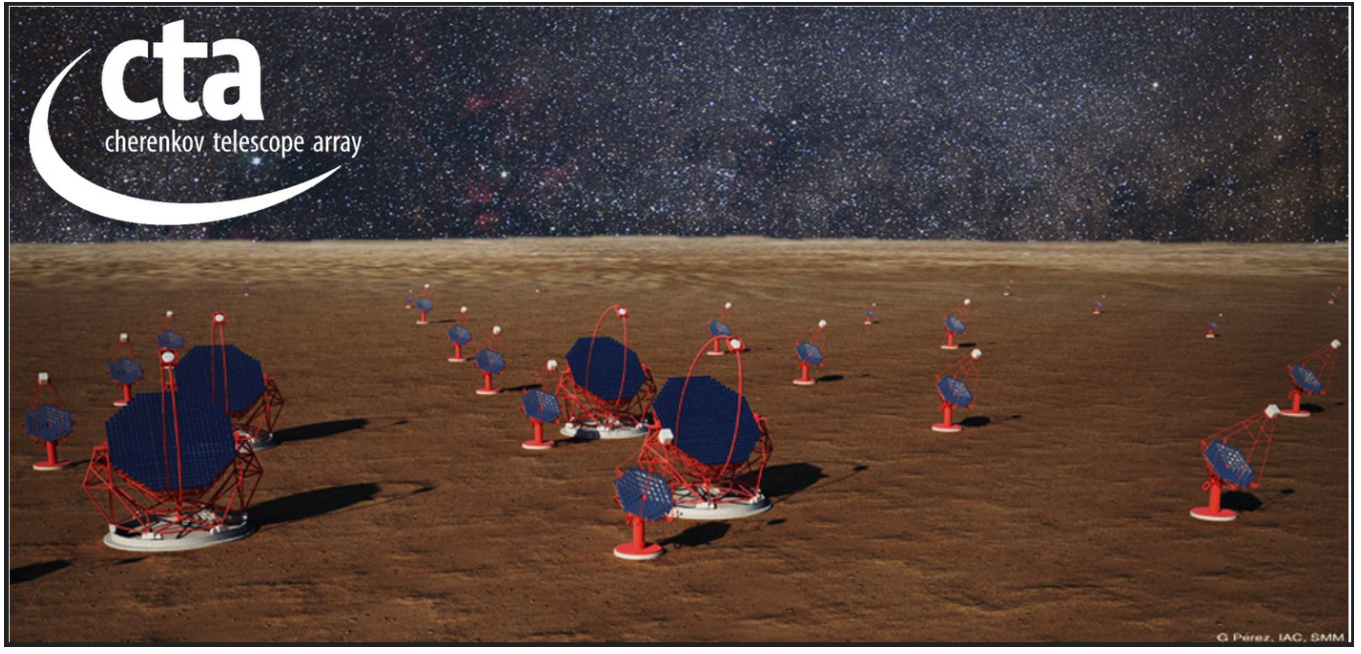


FACT
First G-APD Cherenkov Telescope

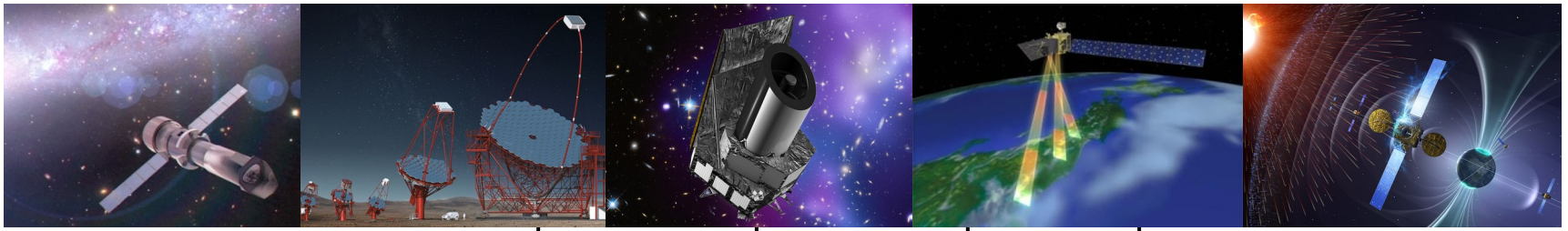
MAGIC

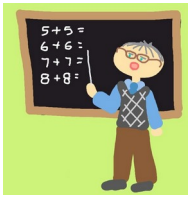
The future of high-energy astrophysics

Athena X-ray Observatory



An infrastructure to support the observation of the Universe





Common Data Center Infrastructure

Logistics

Contract Office

Computing and Simulations

Science and SW Support

Operations

Data and SW Preservation