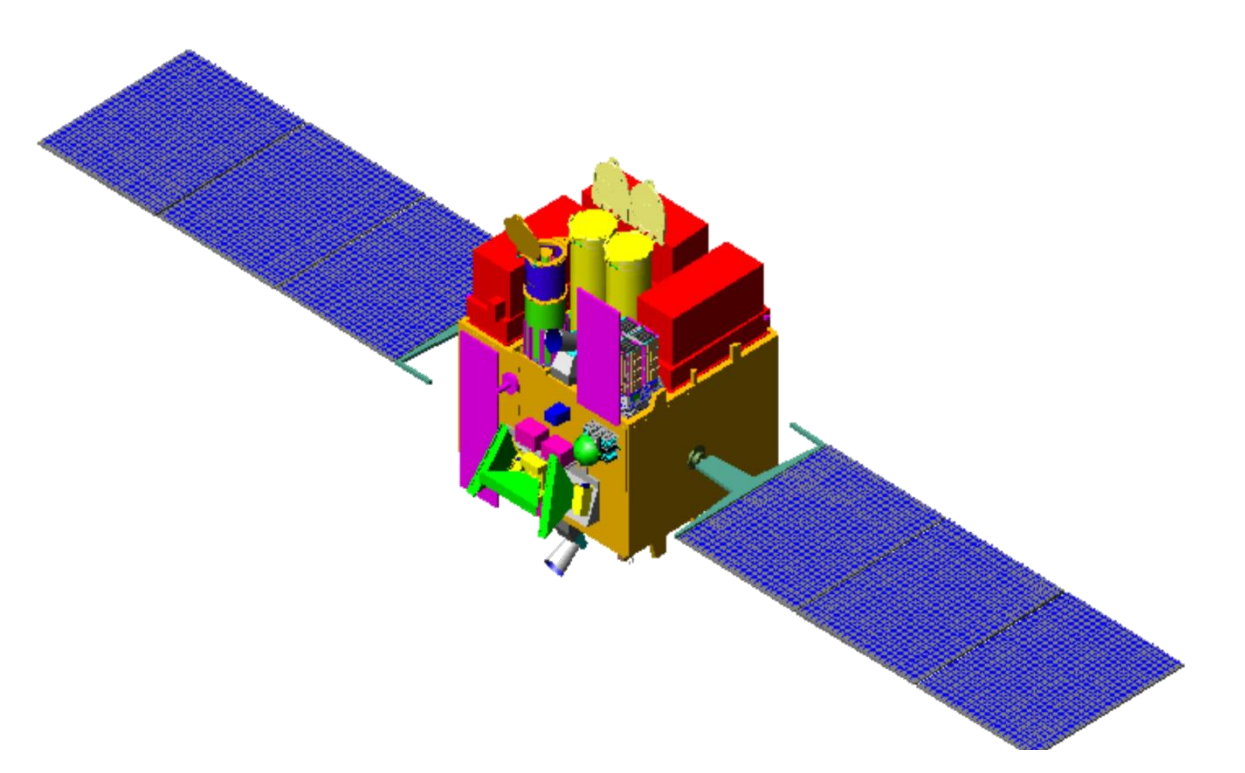
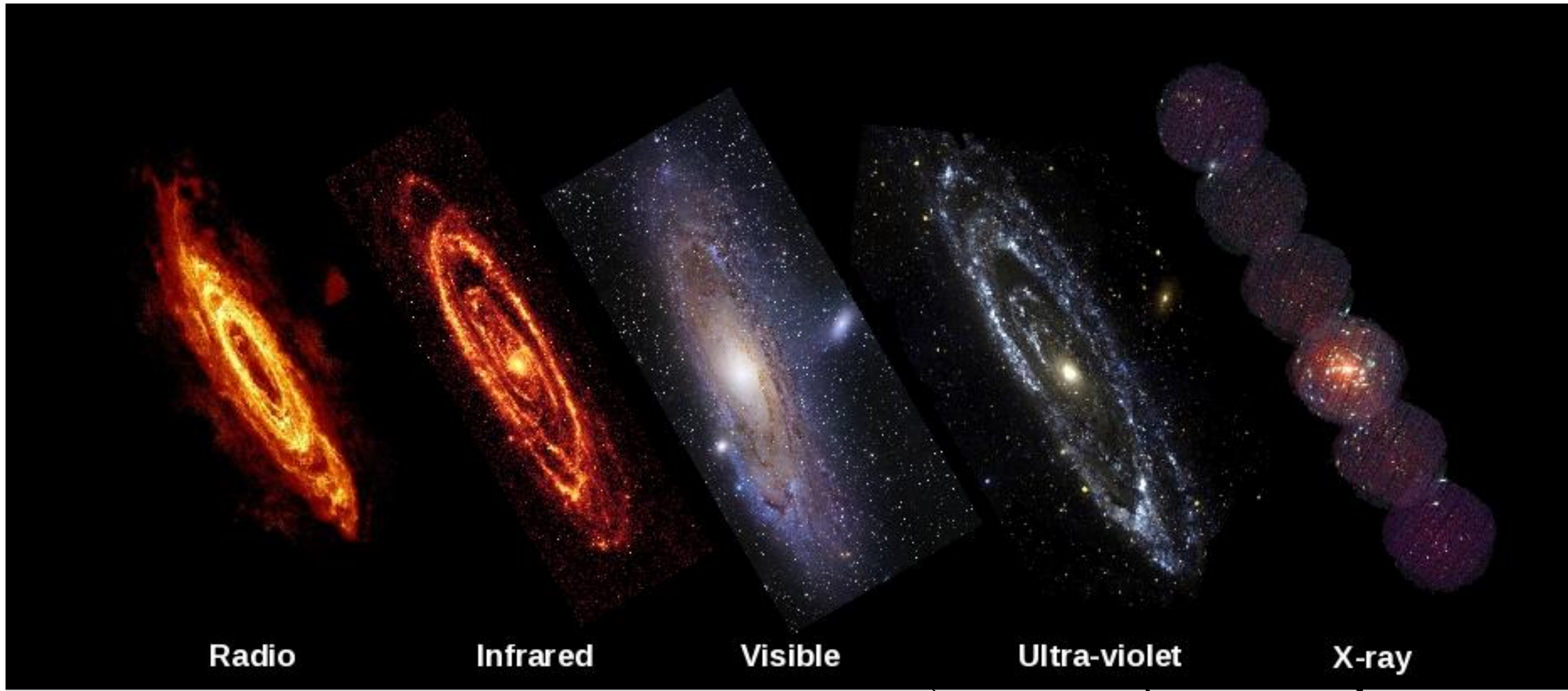




ASTROSAT



Astrosat is India's first dedicated Astronomy satellite and is scheduled to launch on board the PSLV. It is a multiwavelength astronomy mission and will go round the earth in a low inclination equatorial orbit. It is mainly aimed at studying accreting Neutron stars and blackhole sources simultaneously in different wave bands. This "simultaneous" study is important since such sources are highly time varying. We need to "see" them at different wave bands at the same time.



Astrosat observational bands

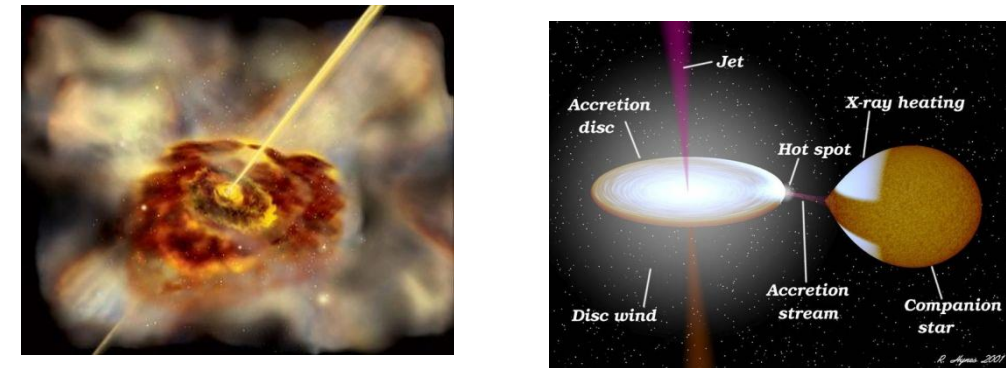
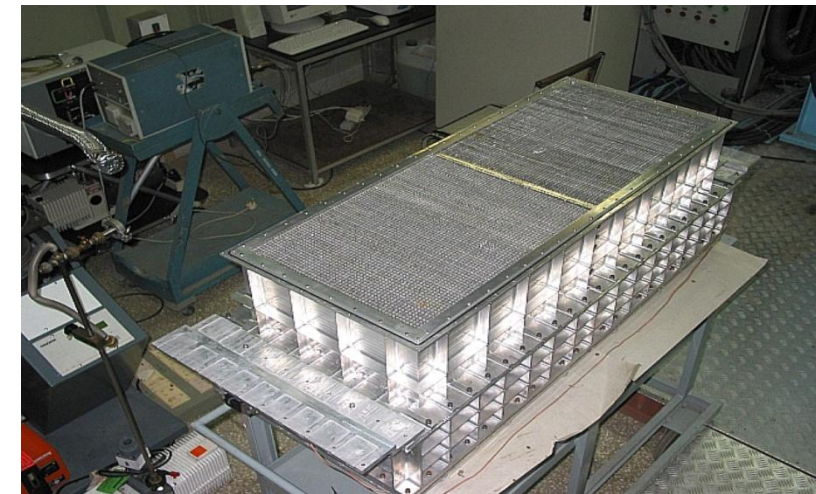
Simultaneous Multi-wavelength Observation

The adjoining figure is that of a galaxy taken at different wavebands at the same time. Astrosat is going to take similar simultaneous images and spectrum of highly variable X-ray sources like Active Galactic Nuclei and X-ray binaries.

LAXPC

(X-ray timing & spectral)

For X-ray timing and low resolution spectral studies over a broad energy band (3-80 keV) ASTROSAT will use a cluster of 3 co-aligned identical large area X-ray proportional Counters (LAXPCs), each with a multi-wire-multi-layer configuration and a field of view of 1×1

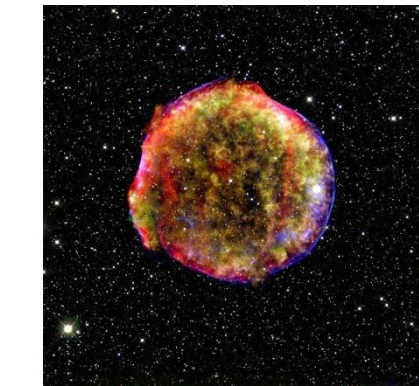
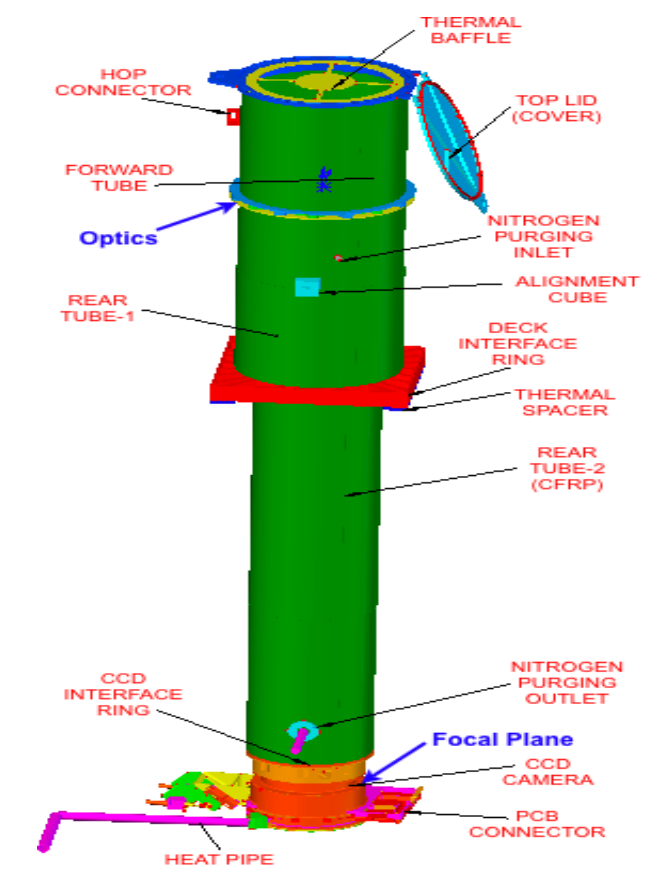


Objects: *Active galactic nucleus X-ray binary stars (an artist's impression)*
Accreting blackhole/neutron stars

SXT

(X-ray imaging)

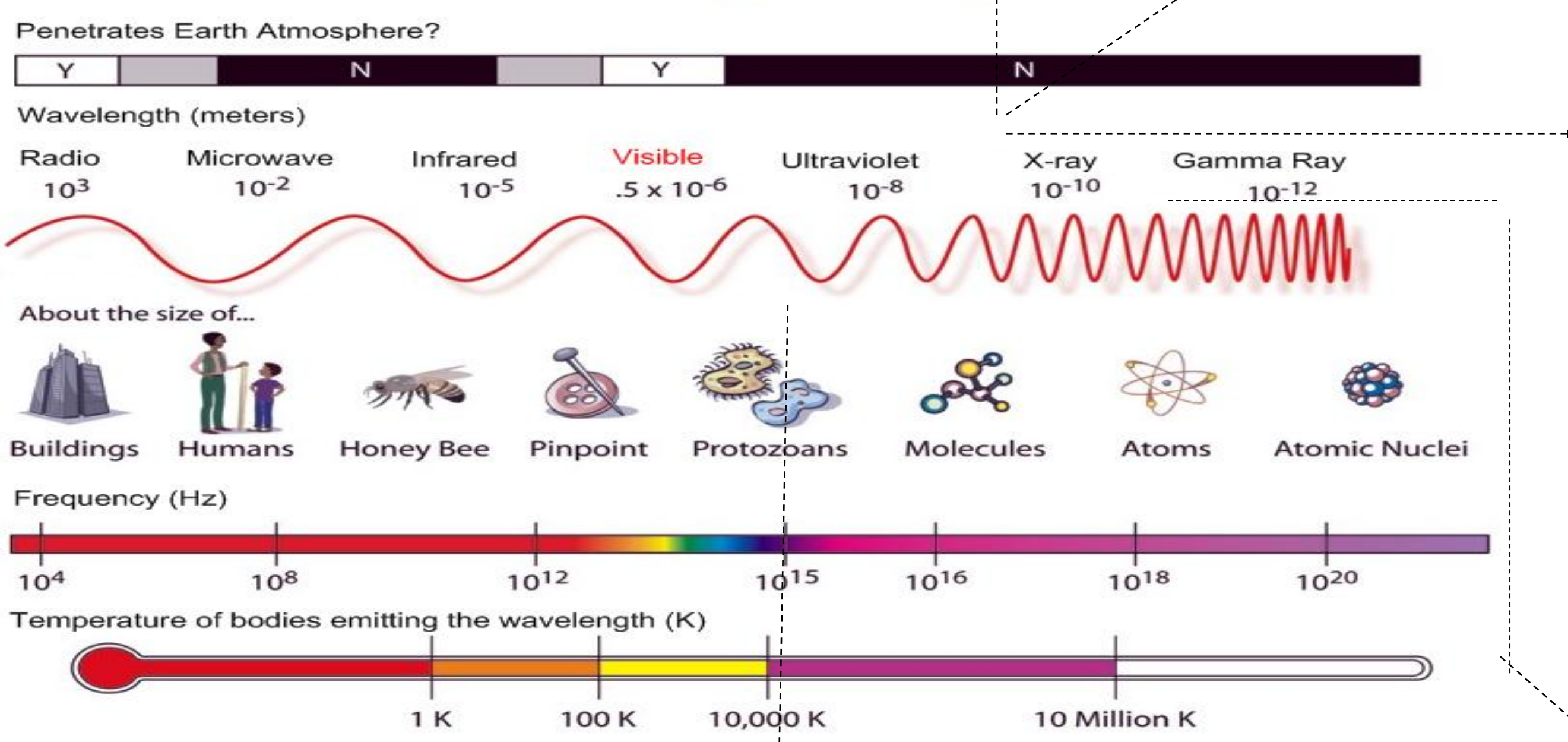
The Soft X-ray Telescope (SXT) will perform X-ray imaging in 0.3-8.0 keV, using deep depletion CCD camera. The CCD will be operated at a temperature of about -80°C



Supernova Remnant Galaxy clusters

Objects:
Accreting White dwarfs, x-ray binaries, AGNs, etc

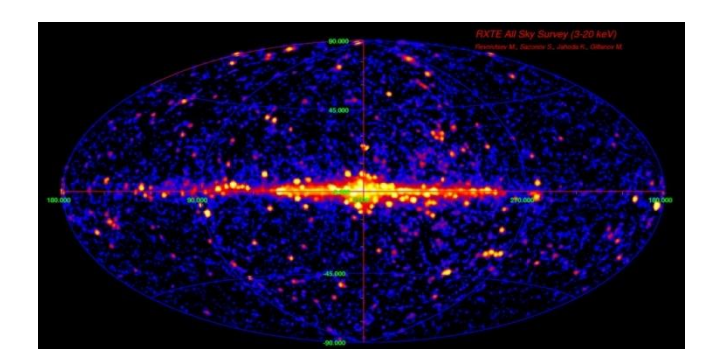
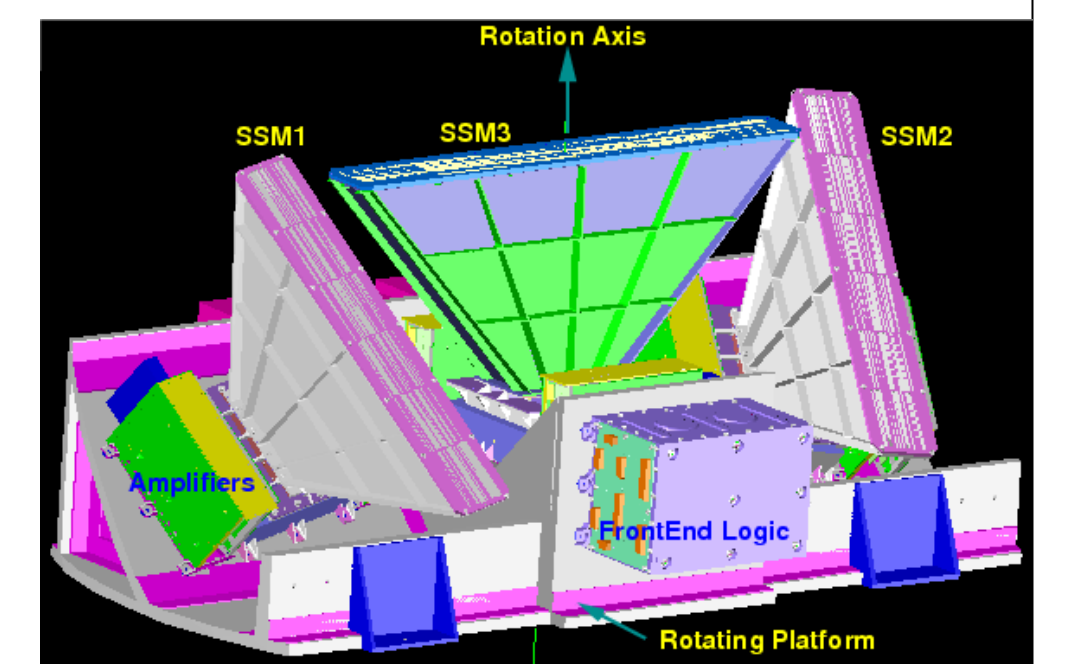
The Electromagnetic Spectrum



SSM

(soft X-ray, scanning the sky)

The Scanning Sky Monitor will consist of three position sensitive proportional counters, from which intensity variations of X-ray sources will be derived.



The RXTE all sky map.

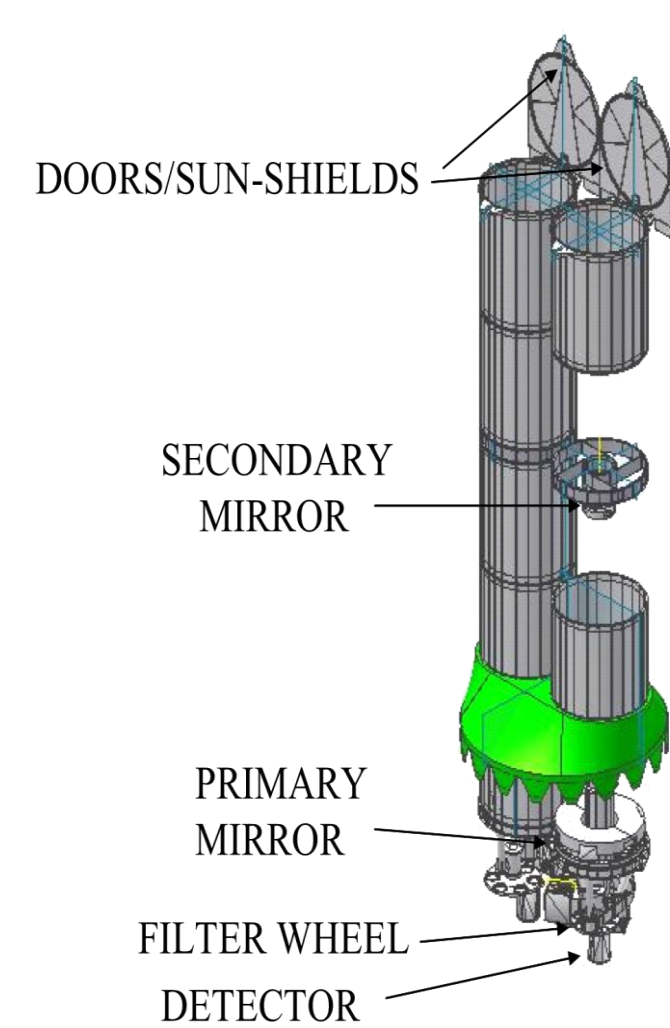
Objects:
RXTE ASM sky map

UVIT

(UV & Optical imaging)

The Ultra-Violet Imaging Telescope will perform imaging simultaneously in 3 bands of U.V spectrum. There are two telescopes. One for Far UV (130-180nm) and other for simultaneous imaging in Near UV (180-300nm) and Visible (320-500nm).

CONFIGURATION OF UVIT



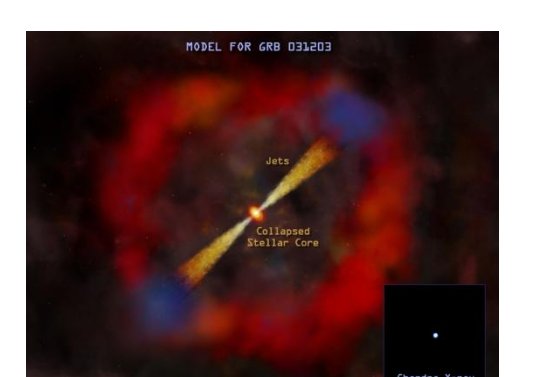
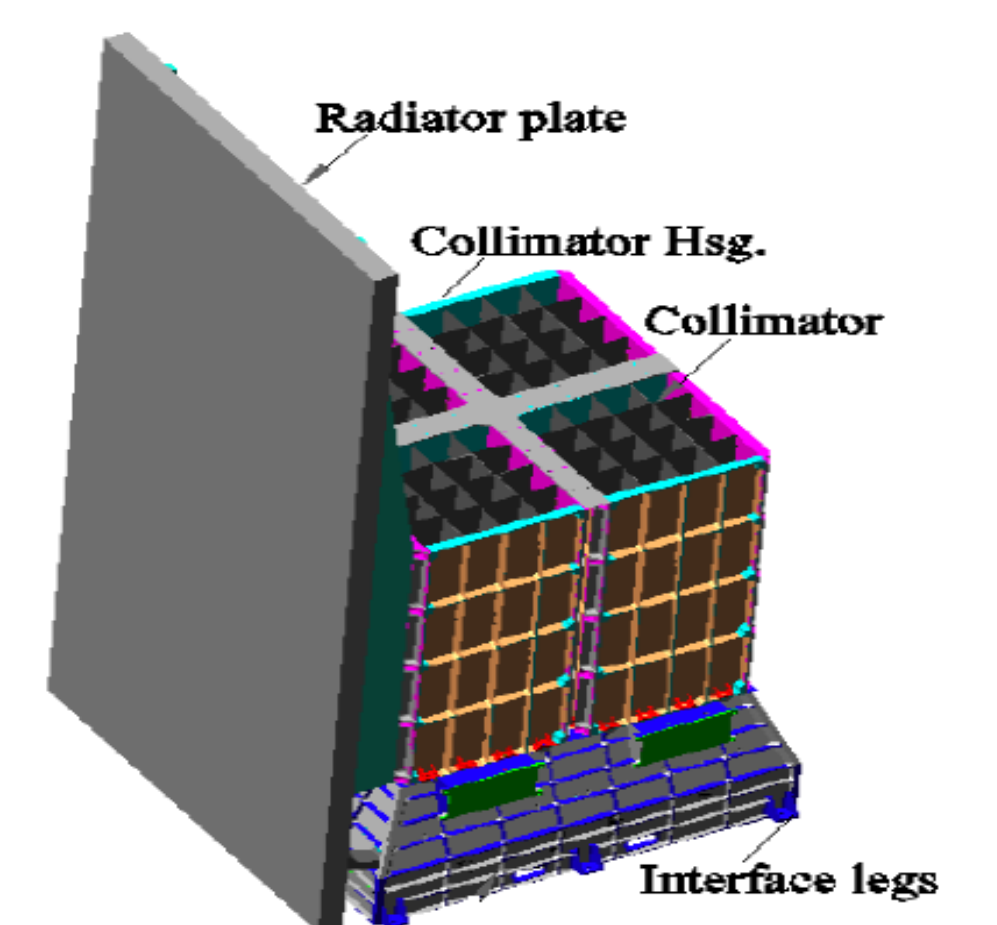
The Coma cluster.

Objects:
Galaxies in nearby Universe

CZTI

(Hard X-ray imager)

ASTROSAT will carry a hard X-ray imager in the form of CZTI. It will consist of a Pixellated-Cadmium-Zinc-Telluride detector array. It is mainly for imaging purposes in hard X-ray.



Gamma Ray Burst (an artist's impression)

Objects:
AGNs, Nonthermal sources, GRBs