Expected Launch:
February 2005

ASTRO-E2

http://lheawww.gsfc.nasa.gov/docs/xray/astroe/

Astro-E2

Mission

Astro-E2 is a joint Japanese-US mission devoted to observations of celestial X-ray objects. Astro-E2 is designed for broad-band, high-sensitivity, high-resolution spectroscopy. This means not only that its instruments are sensitive to both low and high energy X-rays, but they can distinguish very small differences in the energy of the X-ray photons that are being detected. Astro-E2's prime instrument is a revolutionary X-ray micro-calorimeter, which detects the energy of incoming X-rays with unprecedented accuracy.

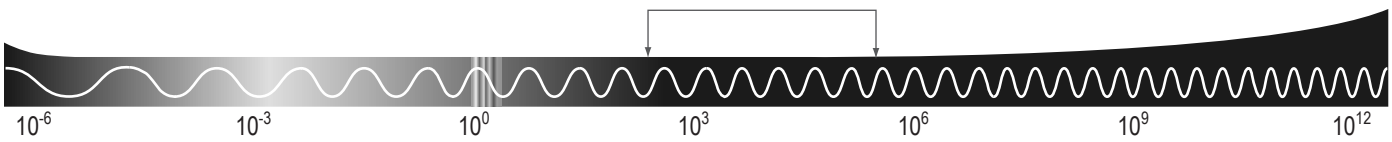
Education and Public Outreach Program

The Astro-E2 education program will give students and teachers the opportunity to participate in the mission and its discoveries. Through the planned educational video "The Story of Astro-E2," students will learn of the history of the mission and witness the challenges and successes of an international collaboration. Students will have an opportunity to share in the data from the mission through a student competition in the fall of 2004. The on-line Learning Center will provide background material and new graphics illustrating what we learn through spectroscopy.
EPO site: *http://astroe.gsfc.nasa.gov/docs/astroe_lc/*

Seeing and Exploring the Universe

X-ray astronomy studies very energetic objects and phenomena in the Universe. X-ray radiation, invisible to the human eye, is generated under the most extreme conditions of gravity, temperature and magnetic fields that exist in black holes, neutron stars, and active galaxies. Using its high resolution spectroscopy capabilities, Astro-E2 will explore how and where chemical elements are created, what happens to matter near a black hole, and how gas is heated to X-ray temperatures. Undoubtedly, Astro-E2 will reveal new objects and unanticipated phenomena, and possibly new fundamental physics.

ASTRO-E2 Energy Range



Electromagnetic energy spectrum in units of electron-Volts (logarithmic scale)