Astro-H Satellite Will Gather Elusive X-ray Data

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Japanese and Canadian astronomers are working together to develop a new satellite capable of detecting and imaging high- and low-energy X-ray emissions from space.

The Astro-H observatory will use a variety of instruments to make observations of some of the most extreme and volatile objects in the Universe, and will allow astronomers to study the dynamics and environments of black holes, supernova remnants, and galaxy clusters. The observatory is designed to achieve exceptionally high resolution X-ray spectra and some of the first high-energy X-ray images.

The international project, known as the "Astro-H X-ray Mission," is spearheaded by the Japanese Aerospace Exploration Agency (JAXA) and is set to launch in 2014. Canadian astronomers and the Canadian Space Agency (CSA) are collaborating on the project, and are responsible for designing the satellite's alignment system. The system, called the Canadian Astro-H Metrology System (CAMS), will allow researchers to correct their data for fluctuations in the alignment experienced by the satellite while in space. This will allow scientists to reduce the blurring and distortion effects in images captured by the satellite.

"The possibilities of what we could learn from this observatory are incredible," said Dr. Luigi Gallo, the principal investigator of the Canadian portion of the project. "We will not only view certain characteristics of astronomical objects for the first time, but we will also

view them with a degree of accuracy and precision unparalleled in previous X-ray missions."

More information: More information about the project is available on the project website: ap.smu.ca/astroh/

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