The high resolution microcalorimeter soft x-ray spectrometer for the Astro-H Mission

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Abstract

We are developing the Soft X-Ray Spectrometer for the JAXA Astro-H mission. The instrument features a 5 eV, 36-pixel array of microcalorimeters designed for high spectral resolution from 0.3-12 keV at the focus of an x-ray mirror, providing a field of view of 3 x 3 arcmin. The principal components of the spectrometer are the microcalorimeter detector system, a 3-stage ADR and dewar. The dewar is a long-life, hybrid design with a superfluid He cryostat, Joule-Thomson cooler, and Stirling coolers. We describe the present design of the SXS instrument and initial engineering model test results.