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Recent Results from the InFOCμS Hard X-Ray Imaging Telescope JACK TUELLER, NASA GSFC, INFOCμS TEAM — InFOCμS is a new generation balloon-borne hard X-ray telescope with focusing optics and spectroscopy. We had a successful 22.5 hour flight from Fort Sumner, NM on September 16-17, 2004. In this paper, we present the performance of the hard X-ray telescope and recent scientific results. InFOCμS detected three galactic sources, 4U 0115+63, Cygnus X-1 and Hercules X-1. Spectral measurements in the 20-50 keV energy range will be presented for these sources. The telescope consists of a depth-graded platinum-carbon multilayer mirror with an 8 m focal length and a CdZnTe detector. Supermirrors are coated on thin aluminum substrates (150) as reflectors. It has an effective area of 49 cm^2 at 30 keV, an angular resolution of 2.6 arcmin (HPD), and a field of view of 10 arcmin. The CdZnTe detector is a pixellated solid-state device capable of imaging spectroscopy. The detector is surrounded by a 3-cm thick CsI anti coincidence shield to reduce background from particles and photons not incident along the mirror focal direction. Detailed performance based on ground calibration results are presented.

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