Ida Results From the Galileo Near Infrared Mapping Spectrometer

R W Carlson, P R Weissman, W D Smythe, M Segura, D L Matson, T V Johnson, Jet Propulsion Laboratory (California Institute of Technology, Pasadena, California 91175)
F P Fanale, J Granahan and T B McCord (University of Hawaii)
L A Soderblom and H H Kieffer (U.S Geological Survey) G E Danielson (California Institute of Technology)

During the August 28, 1993 Galileo flyby of 243 Ida, the Near Infrared Mapping Spectrometer experiment obtained spectral images in the wavelength range 0.7 - 5.2 μm. The first playback of these data provides images at ~ 1.5 km spatial resolution in seventeen spectral bands, encompassing both reflected sunlight and thermal emission. Additional data playback, currently in process, will provide additional detail. Preliminary findings show that the surface of Ida is mineralogically homogeneous and contains both olivine to pyroxene. The measured brightness temperature at 5 μm varies across the surface, with a maximum observed value of 210 K and a thermal inertia of 0.0015 cal cm⁻² K⁻¹ s⁻¹ found. This is about a factor of two less than the thermal inertia found for Gaspra, indicating a finer-grained regolith on Ida.