

"First Decadal Review of the Edgeworth-Kuiper Belt - Towards New Frontiers" to be held on 11-14 March 2003 in Antofagasta/Chile.

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Title: "HST-NICMOS reflectance spectroscopy of Charon's leading and trailing hemisphere"

We have obtained spatially-resolved, low-resolution (R~200), spectra of Pluto and Charon using the near-infrared camera and multiobject spectrometer NICMOS on the Hubble Space Telescope (Dumas et al. 2001. AJ 121, 1163). Our [1.1-2.4]mic, grism-spectra of Charon confirm the presence of water ice in its crystalline state on both leading and trailing hemispheres of the satellite (Brown and Calvin. 2000. Science 287, 107 - Buie and Grundy. 2000. Icarus 148, 324). A 2.21 micron absorption band, possibly due to the presence of ammonia hydrate in surface, is measured in the spectrum of Charon's leading side while it is not detected in the spectrum of its trailing's side (within the noise level). This result supports possible heterogenities in the spatial distribution of the ices coating the surface of Charon. Possible scenarios for the origin of NH<sub>3</sub>.H<sub>2</sub>O on Charon (geologic activity, ion irradiation) will be discussed.