

Thursday, March 20, 2003  
POSTER SESSION II  
7:00 p.m. Fitness Center

**Mars Bipolar Syndrome**

Takayama K. Yokohata T. Odaka M. Kuramoto K.

*Response of Residual CO<sub>2</sub> Ice Cap to Climate Changes on Mars* [#1739]

We construct a new climate model which can calculate the ice cap topography consistently. We apply it to the partitioning of CO<sub>2</sub> on Mars which plays an important role in controlling the martian climate, and discuss the past climate change.

Hale A. S. Bass D. S. Tamppari L. K.

*Water Ice Albedo Variations on the Martian Northern Polar Cap: A Progress Report* [#1422]

We present an ongoing analysis using MGS MOC and TES data to observe albedo changes in the northern polar cap throughout the summer season.

Tamppari L. K. Hale A. S. Bass D. S. Smith M. D.

*Using MGS TES Data to Understand Water Cycling in Mars' North Polar Region* [#1650]

In order to understand the polar dichotomy, our approach is to examine the water transport and cycling issues within the north polar region and in/out of the region on seasonal and annual timescales.

Brightwell S. N. Kargel J. S. Titus T. N.

*Martian South Polar Deformation and Sublimation Processes* [#2077]

Within the south polar cap various deformational features have been found, including boudinage, folds, and faults. In addition, distinctive ice and dry-ice sublimation features exist.

Kostama V.-P. Kreslavsky M. A. Head J. W.

*Morphology of the Northern Plains in the Circumpolar Region, Mars* [#1340]

Morphology of northern plains in circumpolar region of Mars is studied with the high-resolution MOC images. The focus of this systematic survey is the characteristics and distributions of the surface textures and circular (including impact) features.

Milkovich S. M. Head J. W. III

*Characterizing Polar Layered Deposits at the Martian North Pole: Current Results and Techniques* [#1342]

Characterization of the layered terrain within two troughs of the north pole of Mars reveals details of the individual layers which will constrain formation models. Fourier analysis may provide a valuable tool for correlation of layer sequences.

Fishbaugh K. E. Head J. W. III

*Characteristics of the Mars North Polar Basal Unit and Its Role in the Geologic History of the Region* [#1250]

We describe the characteristics of the dark, layered unit beneath the north polar cap which could represent part of the "missing" geologic history between the Late Hesperian and Late Amazonian and may currently act as basal ice.

Costard F. Dupeyrat L. Peulvast J. P.

*Chasma Boreale: The Role of Supra-Glacial Erosion* [#1354]

The purpose of that study is to characterize the efficiency of the erosional process which would take place during a catastrophic flooding event in the Chasma Boreale (Mars). We performed a detailed numerical analysis of the main parameters affecting the erosion rate during the flooding event.

Pomerantz W. J. Head J. W. III

*Thumbprint Terrain and Sinuous Troughs with Medial Ridges in the Northern Lowlands of Mars: Assessment of the Glacial Hypothesis Using New Spacecraft Data* [#1277]

Study evaluating previous hypotheses regarding the thumbprint terrain and associated sinuous troughs with medial ridges in the northern lowlands of Mars. Glacial formation hypotheses in particular reconsidered using data from MOLA.

Finnegan D. F. Lawson D. E. Rice J. W. Jr. Zimbelman J. R.

*Terrestrial Glacial Processes: Analogs for Martian Polar Landform Development* [#1969]

An integrated, field-based understanding of terrestrial glacier and ice sheet processes has broad implications for assessing the landforms and terrain origins of modern and ancient glaciers and ice sheets on Mars.