PRINT ONLY: MARS

Aftabi P.
Laboratory Testing of the Ice-Salt Intrusions and Extrusions in Craters for Determining Mars Landing Site **[#1179]**
The experiments suggest that the craters are the best areas for water exploration, because of the ice or ice-salt mixture raised in the center of craters.

Coleman N.
Round Mesas on the Floor of Ravi Vallis, Mars — Are they Igneous Intrusions? **[#2154]**
Three round mesas have been discovered on the floor of Ravi Vallis. They may be an evolved form of the streamlined islands seen elsewhere in channels. Other evidence suggests they may be the flood-eroded remnants of igneous intrusive bodies (stocks) in the Noachian crust.

de Pablo M. A. Pacifici A. Komatsu G.
A Possible Small Frozen Lake in Utopia Planitia, Mars **[#1057]**
We describe the geomorphological features observed on a MOC-na image (E0402007) that reveal the existence of a possible small frozen lake on the surface of Utopia Planitia. Some of its characteristics are similar to some frozen lakes on the Earth.

Desjardins R. Rognon P. Forget F.
The Mars Northern Residual Ice Cap: New Geomorphologic Facts About Its Formation and Evolution **[#1283]**
The NPLD form a dome on the pole and it is connected to a lobe. These two entities are separated by Chasma Boreale. They are, however, joined by a transition zone having unique geomorphologic characteristics that can be explained by ice flow mechanism.

Drake J. S.
Initial Results from a Survey of Rimless Depressions on Mars Using THEMIS and MOLA Data **[#2160]**
Circular and elliptical depressions, distinct from impact craters by their steep walls and lack of rims or ejecta, have been identified at several locations on Mars, but never mapped globally. This project endeavors to do so, using THEMIS and MOLA.

Hugenholtz C. H.
Frosted Granular Flow as an Analog for Recent Gully Activity on Mars **[#1527]**
In this paper frosted granular flow (FGF) is presented as a new hypothesis for recent mass wasting in martian gullies. FGF is a rare type of terrestrial granular flow that has been observed on a maritime talus slope in the Province of Québec, Canada.

Lee C. B.
Formation of a Double Layer Ejecta Crater in the Northern Hemisphere of Mars **[#1609]**
This paper reports a study on forming processes of a double layer ejecta crater in the northern hemisphere of Mars.

Maxe L. P.
FTIR Spectra of Possible End Products of Martian Surface Weathering **[#2002]**
Comparative analysis of IR spectra shows that martian weathering can lead to separating destruction of surface rocks. The semi-cosmic martian weathering results in amorphous silica dust and open unique ferry aluminum/ferry silicate martian rocks.

Mitrofanov I. G. Boynton W. V. Litvak M. L. Demidov N.
Characterization of Types and Content of Phyllosilicates in the Shallow Subsurface in Different Regions of Mars Based on Data from Gamma-Ray Spectrometer Suite (Mars Odyssey) **[#1597]**
We focus on characterization of types and bulk content of phyllosilicates in the shallow subsurface of different regions of Mars using the GRS data of Mars Odyssey for elementary composition of martian soil.

Nußbaumer J.
The Granicus and Tinjar Valles Channel System **[#1724]**
Granicus Valles is a valley system that formed to the west of the Elysium Mons volcano. Formation ages, the flow velocity, amount of water per time, and the flow duration were calculated.

Page D. P.
Athabasca Valles, Mars: (Not) a Lava-draped Channel System **[#2068]**
Stratigraphical observations in Athabasca Valles demonstrate that all the supposedly volcanic landforms of this region are post-depositional, postdating the surface by many millions of years, as documented by structural relations with impact craters.

Papike J. J. Karner J. M. Burger P. V. Shearer C. K. Wang A.
Mars Surface Mineralogy: Kieserite $MgSO_4 \cdot H_2O$. Characterization of a Terrestrial End-Member **[#1001]**
Characterization of a terrestrial kieserite, a mineral that has been identified on Mars.

Sprenke K. F.
Wrinkles in the Elastic Shell of Mars **[#1007]**
Recent physics laboratory experiments have investigated the wrinkling of thin elastic sheets by water droplets. Spherical harmonic analysis of the martian geoid suggests that the Tharsis load has resulted in similar wrinkling in the elastic shell of Mars.

Tichý M.
A Giant Sinkhole on Mars **[#1039]**
The South Polar Crater on Mars, near 86.8°S, 111.6°W, the photo of which was presented as NASA MPD on Feb. 7, 2004, is assumed to be an old meteor impact crater. However, observations of the photograph indicate that a giant sinkhole is dealt with.

HiRISE Team Tornabene L. L. McEwen A. S.
Recent Channel Systems Emanating from Hale Crater Ejecta: Implications for the Noachian Landscape Evolution of Mars **[#2180]**
Hale crater is a large (D ~125 × 150) and is possibly the youngest crater of its size. Recent THEMIS, HiRISE, and CTX observations reveal channel systems emanating from Hale crater ejecta, which has implications for the Noachian period.

Waller D. Greeley R. Neakrase L. D. Sullivan R. Johnson J. Athena Science Team
Near-Surface Wind Speeds Inferred from Movement of Sand Grains Observed by Spirit in Gusev Crater, Mars **[#2218]**
Wind is the dominant agent of surface modification on Mars in the current environment, as evidenced by active dust storms and abundant wind-related surface features observed from orbit and the ground.