Tuesday, March 14, 2000  
POSTER SESSION I  
7:00 p.m.  UHCL

Blue Mars

Strom R. G., Komatsu G., Nolan L.  
*Loire Vallis: The Grand Canyon of Mars [#1090]*  
Loire Vallis on Mars is similar in scale, morphology, and morphometry to the Grand Canyon of Arizona. The process of formation, e.g., water run-off and slope processes, may also have been similar.

Berman D. C., Hartmann W. K.  
*Preliminary Observations of Martian Channels from Mars Global Surveyor [#1523]*  
We are beginning a systematic study of channels and report some preliminary observations. Many channels have dune covered floors but some have crater populations that constrain the age of the last flow.

Skinner J. A., Tanaka K. L.  
*Southern Chryse Outflow Channels, Mars: Origin of Reversed Channel Gradients and Chaotic Depressions [#2076]*  
Reversed floor gradients in the southern Chryse outflow channels may in part be explained by local deposition of channel sediments, but likely ~200 to 300 m of tectonic uplift has occurred near the mouths of the channel systems.

*A Chaotic Terrain Formation Hypothesis: Explosive Outgas and Outflow by Dissociation of Clathrate on Mars [#1434]*  
Chaotic terrain on Mars has destructive landforms connected with outflow channels. We propose that dissociation of clathrate in the Martian crust led to the liquefaction, fluidization, and explosive pulverization of rocks and consequent outflows.

Nelson D. M., Greeley R., Farmer J. D., Kuzmin R. O., Klein H. P.  
*Potential Ancient Fluvial Deposits at the Amenthes Rupes Paleolake, Mars [#1158]*  
The channel and paleolake of Amenthes Rupes is proposed to be an ancient fluvial system on Mars, where inferred fluvial activity occurred during Noachian-Hesperian periods. The paleolake mouth is proposed as a landing site for future Mars missions.

Cabrol N. A., Grin E. A.  
*Lacustrine Deltas in Martian Impact Craters: Morphologies, Types, and Significance [#1162]*  
Our poster will present the hydrological, climatological, and potentially exobiological significance of the observed deltas in martian impact craters through time.

Grin E. A., Cabrol N. A.  
*Hydrologic and Climatic Significance of Lacustrine Deltas in Martian Impact Craters [#1299]*  
We investigate the conditions of lake generation in impact craters and subsequent deltaic formation, and what is the critical amount of water, and its duration in order to excavate the valleys, form the lake and the delta.

Cabrol N. A., Marinangeli L., Grin E. A.  
*Hydrology in the Durius Valles Region: Evaluation of Possible Correlation with Volcanism and Magnetic Anomalies [#1163]*  
We envision the contribution of subglacial flows, hydrothermalism and sapping in the Durius Valles system and the consequences in term of climate on Mars in recent geological times. We evaluate the possible correlation of the hydrology with volcanism and magnetic anomalies.
Craddock R. A.  Cook A. C.
Classification and Morphometry of Martian Ancient Valley Networks [#1625]
A preliminary classification of valley network morphology based on MGS and Viking data is presented. The variety of morphologies indicate that there was a great deal of spatial and temporal variability in how they formed.

Mangold N.  Allemand P.  Peulvast J.-P.
Topography of Ice Related Features on Mars [#1131]
The analysis of MOLA profiles of 5 lobate debris aprons on Mars confirms that these features are due to the creep of ice inside rocky debris. The measurement of their volumes gives information on their formation and the origin of interstitial ice.

Rossi A. P.  Komatsu G.  Kargel J. S.
Rock Glacier-like Landforms in Valles Marineris, Mars [#1587]
Recent MOC images of the slopes of Valles Marineris revealed landforms such as flow-like features and possible cirques resembling terrestrial rock glaciers. The landforms appear pristine and geologically recent in age.

Fishbaugh K. E.  Head J. W. III  Pratt S.
South Polar Chasmata: Analysis of MOLA Data and Evidence for Basal Melting and Ponding in the Prometheus Basin [#1206]
MOLA data suggest that basal melting occurred below the Amazonian-aged south polar layered deposits and formed chasmata, flooding the Prometheus basin to depths of hundreds of meters during the Hesperian.

Weitz C. M.  Parker T. J.
New Evidence that the Valles Marineris Interior Layered Deposits Formed in Standing Bodies of Water [#1693]
Our results indicate that the best explanation for the origin and current morphology of the Valles Marineris interior layered deposits is by deposition of sediments, including chemical precipitates, in standing bodies of water.

Baker L. L.  Wood S. A.
Experimental Hydrothermal Alteration of Mars Analog Rocks [#2046]
We are experimentally altering mafic rocks under conditions thought to resemble those in the Martian crust, in order to constrain the conditions under which the alteration minerals in some Martian meteorites may have formed.

Formation of C-13 Enriched Carbonates on the Planet Mars: Clues from Laboratory-produced Cryogenic Calcite [#1885]
The production of cryogenic calcite by freezing bicarbonate-rich fluids is accompanied by an isotopic enrichment in C isotopes relative to the bicarbonate. The mechanism of cryogenic calcite formation could explain the presence of C-13 enriched carbonate found in ALH84001.

Jöns H.-P.  Kochan H.
Fossil Mud Sheet Floods on Mars: H₂O or CO₂? [#1764]
Instead of water, CO₂ could have played a major role during the formation of some special features of the martian relief, especially in the vicinity of the polar caps.

Raizer V.  Linkin V. M.  Ozorovich Y. R.  Smythe W. D.  Zoubkov B.  Babkin F.
Active-Passive Microwave Remote Sensing of Martian Permafrost and Subsurface Water [#1258]
The investigation of permafrost formation global distribution and their appearance in h ≤1 m thick subsurface layer would be investigated successfully by employment of active-passive microwave remote sensing techniques.