Tuesday, March 13, 2007
POSTER SESSION I: MARS VALLEY NETWORKS
6:30 p.m. Fitness Center

Kereszturi A. Gabris Gy.
Proposal for Drainage Network Types on Mars **[#1045]**
The authors propose five drainage network types for Mars with their basic morphometric, morphologic characteristics, and possible analogs on Earth.

Tornabene L. L. McEwen A. S. Grant J. A. Mouginis-Mark P. J. Squyres S. W. Wray J. J.
Evidence for the Role of Volatiles on Martian Impact Craters as Revealed by HiRISE **[#2215]**
Recently acquired HiRISE images of Mojave and other recent and well preserved craters indicate that water-related morphological features may be related to subsurface volatile/ice-rich reservoirs and the impact process.

Pondrelli M. Rossi A. P. Marinangeli L. Hauber E. Ori G. G. Neukum G.
Geological Map of the Holden and Eberswalde Craters Area **[#1254]**
We present a geological map of the Holden and Eberswalde craters area, probably one of the most challenging areas in terms of cartography of sedimentary deposits.

Schieber J.
Reinterpretation of the Martian Eberswalde Delta in the Light of New HiRISE Images **[#1982]**
HiRISE images from the martian Eberswalde Delta indicate abundant gravel in the channels and highly energetic, episodic discharge. Positive relief preservation could be related to inability of wind to carry gravel. Polygonal cracks point to basin desiccation between discharge events.

De Hon R. A.
On Meandering and Sinuosity of Martian Channels **[#1226]**
Sinuosity of martian channels is not equivalent to meandering. Neither sinuous channels nor meander scars imply flow lifetimes of millennia.

Som S. M. Montgomery D. R. Greenberg H. M.
Terrestrial Ephemeral-Channels as Analogues for Large Valley Networks on Mars **[#1885]**
We compare the downstream trend in width and slope of large valley networks on Mars, with the downstream trend of perennial and ephemeral water carved channels on Earth, in addition to ancient flood channels preserved in the terrestrial geological record.

Williams K. K. Fortezzo C. M. Grant J. A.
Mapping Margaritifer Terra: Fluvial Features, Basins, and Models **[#2220]**
Geomorphic mapping in Margaritifer Terra continues to reveal interesting details of the area's geologic history. Among these are long-lived meandering systems and basin-scale sinks for regional fluvial activity.

Stepinski T. F. Luo W. Qi Y.
Precision Mapping of Valley Networks in Margaritifer Sinus, Mars **[#1205]**
Valley networks in Margaritifer Sinus quadrangle are mapped using a computer algorithm. The new map reveals wider existence of valleys than has been inferred from older maps. This suggests runoff as the primary mechanism for origin of the valleys.

Lang N. P.
Sinuous Ridge Formation in Southeastern Argyre Planitia, Mars **[#2207]**
I use imagery and altimetry datasets to investigate processes of sinuous ridge formation in southeastern Argyre Planitia, Mars. I conclude that ridge formation is consistent with subglacial fluvial processes.

Williams R. M. E.
Global Spatial Distribution of Raised Curvilinear Features on Mars **[#1821]**
Preliminary age assessment of 175 raised curvilinear features (RCFs) reveals over half of these landforms appear to superpose post-Noachian terrain, suggesting that fluvial activity during this period was more prevalent than previously recognized.

Jones T. K. Gregg T. K. P. Crown D. A.
A Quantitative Investigation of Fluvial Activity in the Hesperia Planum Region, Mars **[#2156]**
Groundwater flow and valley discharge is evaluated for highland basins and their surrounding watersheds in the highlands near Hesperia Planum, Mars.

Jaumann R. Reiss D. Sander T. Gwinner K. Hauber E. Hoffmann H. Roatsch T. Erkeling G. Friedrich S. Neukum G.
Source Regions and Multiple Water Release Events in Valley Networks of the Libya Montes Region on Mars **[#1729]**
We investigate a valley network in the western Libya Montes region, which originates in a highland mountain region and drains down to Isidis Planitia over a distance of about 400 km.

Morgan G. A. Head J. W. III
Impact-induced Hesperian Valley Networks and Their Implications for the Hesperian Climatic Regime **[#1622]**
A new type of Hesperian-aged valley network system is described around a 60 km crater near the dichotomy boundary on Mars. We interpret the origin to be related to the interaction of hot impact ejecta deposits and snow and ice.

Michael G. Neukum G.
Refinement of Cratering Model Age for the Case of Partial Resurfacing **[#1825]**
Erosional or mantling resurfacing processes change the crater population by removing members at the low-diameter edge of the distribution. We discuss a method to account for this in surface dating by crater population.

Hoke M. R. T. Hynek B. M.
Valley Network Age Determinations: Multiple Periods of Formation **[#1209]**
We show evidence for multiple valley formation episodes within one valley network in Arabia Terra. Crater density determinations indicate that one branch falls on the Middle-Late Noachian boundary and the other on the Noachian-Hesperian boundary.

Fassett C. I. Head J. W. III
Age Constraints on Martian Valley Networks from Buffered Crater Counting **[#1030]**
Buffered crater counting on Mars' valley networks reveal they are Early Hesperian or older, with only a few interesting local exceptions. This is consistent with a global shift in the surface environment having occurred from early Mars to today.