**Tuesday, March 20, 2018** **[T312]**
**POSTER SESSION I: MARS GEOLOGIC MAPPING AND NEW DATA ANALYSIS TECHNIQUES**
**6:00 p.m. Town Center Exhibit Area**

Hiesinger H. Bernhardt H. Reiss D. Tirsch D. Jaumann R. et al. ***POSTER LOCATION #137***
*Absolute Model Ages and Stratigraphy of Neukum Crater Geologic Units* **[#2001]**
We report on a new geologic map of Neukum Crater in Noachis Terra, Mars, as well as on the stratigraphy and absolute model ages of its geological units.

Goliber S. A. Gregg T. K. P. ***POSTER LOCATION #138***
*A Plethora of Planetary Processes in Southern Hesperia Planum, Mars: Water, Ice, and Mass Wasting* **[#2444]**
Detailed mapping of Southern Hesperia Planum, Mars reveals abundant evidence for volatile-rich resurfacing processes.

Berman D. C. Weitz C. M. Rodriguez J. A. P. Crown D. A. ***POSTER LOCATION #139***
*Geologic Map of the Source Region of Shalbatana Vallis, Mars* **[#1549]**
We are currently producing a 1:500,000-scale USGS geologic map of MTM quadrangles 00042 and 00047 in the Xanthe Terra region of Mars.

Crown D. A. Berman D. C. Scheidt S. P. Hauber E. ***POSTER LOCATION #140***
*Geologic Mapping of the Western Flank of Alba Mons, Mars* **[#1638]**
Geologic mapping documents the volcanic, fluvial, tectonic, and impact processes that have shaped the western flank of Alba Mons.

Chuang F. C. Crown D. A. Berman D. C. ***POSTER LOCATION #141***
*Geology of the Northeastern Flank of Apollinaris Mons, Mars: Constraints on the Erosional History from Morphology, Topography, and Crater Populations* **[#1776]**
Of the eight geologic units in the study region, three are identified as volcanic flank materials. Of this, ~8,632 $km^3$ of upper flank material has been removed.

DeLatte D. M. Crites S. T. Guttenberg N. Tasker E. J. Yairi T. ***POSTER LOCATION #142***
*Exploration of Machine Learning Methods for Crater Counting on Mars* **[#1948]**
This work describes a few machine learning techniques that have been applied to Mars crater datasets: Convolutional neural networks and segmentation.

Hood D. R. Karunatillake S. Fassett C. I. Sholes S. F. ***POSTER LOCATION #143***
*Automated Boulder Detection and Measuring in HiRISE Images* **[#2437]**
The Martian Automatic Boulder Recognition System: MBARS is a python-based algorithm to automatically detect, locate, and measure boulders in HiRISE images.

Wohlfarth K. S. Liu W. C. Wu B. Grumpe A. Wöhler C. ***POSTER LOCATION #144***
*High Resolution Digital Terrain Models of the Martian Surface: Compensation of the Atmosphere on CTX Imagery* **[#2498]**
We present a framework for the construction of high-resolution digital terrain models of the martian surface in the presence of strong atmospheric disturbances.

Mayer D. P. ***POSTER LOCATION #145***
*An Improved Workflow for Producing Digital Terrain Models of Mars from CTX Stereo Data Using the NASA Ames Stereo Pipeline* **[#1604]**
CTX Topos / Smooth and rough terrain success / Use ASP new features.

Ahern A. A. Rogers A. D. ***POSTER LOCATION #146***
*Constraining the Thermal Inertia of Martian Bedrock Exposures Using Overlapping THEMIS Observations* **[#2224]**
Thermal inertia / Can help us see the bedrock / Hiding under stuff.

McCarty C. B. Moersch J. E. ***POSTER LOCATION #147***
*Using Diurnal Thermal Inertia Variations from Themis to Determine Sub-Pixel Grain Size Heterogeneity on the Martian Surface* **[#2716]**
Martian grain sizes / Are they homogeneous? / Thermal inertia.

Dickson J. L. Kerber L. A. Fassett C. I. Ehlmann B. L. ***POSTER LOCATION #148***
*A Global, Blended CTX Mosaic of Mars with Vectorized Seam Mapping: A New Mosaicking Pipeline Using Principles of Non-Destructive Image Editing* **[#2480]**
We present a global CTX mosaic of Mars that uses non-destructive processing to preserve image metadata and produce precise image boundaries.