Wednesday, May 20, 2015 WE CARE BECAUSE WE ... 8:00 a.m. E200 Auditorium

Chairs: Caleb Fassett Paul Schenk

8:00 a.m. Head J. W. III \*

Impact Cratering: Relationship to Geological History of the Terrestrial Planets and Future

Exploration Goals [#9037]

We explore impact cratering and the relationship to geological history of the terrestrial planets and

future exploration goals.

8:40 a.m. Bugiolacchi R. \*

New Insights into the Crater and Boulder Distributions Across the Apollo 17 Region [#9002] d/D profiles, boulder tracks, isotopic data, and localised size-frequency distribution of small craters, point to two major surface modification events in the Apollo 17 region, one linked to Tycho crater, and a newly proposed one, at around 20 Ma.

9:05 a.m. Singer K. N. \* Stern S. A.

Impacts and Cratering on Pluto: Implications for the Source of Pluto's Nitrogen (N<sub>2</sub>) [#9031]

Craters on Pluto and Charon will provide key information, including clues to the source of Pluto's surface and atmospheric N<sub>2</sub>. With current estimates of impactor flux on Pluto, comets could not deliver enough N<sub>2</sub>, but impacts might excavate it.

9:30 a.m. Neesemann A. \* Kneissl T. Schmedemann N. Walter S. H. G. Michael G. G. van Gasselt S. Hiesinger H. Jaumann R. Raymond C. Russell C. T.

Investigations and Regression Analyses of Size-Frequency Distributions of Sub-Kilometer Impact

Craters on Vesta [#9019]

We have measured size-frequency distributions of sub-km impact craters on fresh units on Vesta and performed weighted least squares regression analyses. Derived power-law exponents were then compared with the two currently used production functions.

9:55 a.m. BREAK