Tuesday, September 22, 2015
SCIENTIFIC WRITING AND PUBLISHING — A PERSPECTIVE FROM NATURE GEOSCIENCE
8:30 a.m. Pathology and Anatomy Lecture Hall

08:30 Goldin T. *
Scientific Writing and Publishing — A Perspective from Nature Geoscience

CRATER EXCAVATION AND EJECTION PROCESSES
9:00 a.m. Pathology and Anatomy Lecture Hall

Chairs: **Kai Wünnemann**
Mark Burchell

09:00 Wünnemann K. * Zhu M.-H. Stöffler D.
Insight into Crater Formation, Shock Metamorphism, and Ejecta Distribution from Laboratory Experiments and Modeling **[#1067]**
We compare laboratory cratering experiments and numerical modeling to gain a better understanding of the relationship between the preimpact location and ejection distance of particles and their degree of shock compression.

09:15 Ormö J. * Melero-Asensio I. Housen K. Wünnemann K. Elbeshausen D. Collins G.
The Experimental Projectile Impact Chamber (EPIC), Spain **[#1001]**
We show that EPIC dry sand experiments are consistent with previous experimental work within the pi-group scaling framework, and use the craters as ground truth for the validation of numerical impact models, before moving forward with wet targets.

09:30 Luther R. * Wünnemann K. Artemieva N. A.
Numerical Simulation of Non-Ballistic Ejection Processes as a Function of Material Properties **[#1068]**
Our study focuses on the numerical description of ejection processes in atmosphere and impact plume.

09:45 Sturm S. * Krüger T. Kenkmann T.
Structural Rim Uplift and Ejecta Thickness Measurements of Complex Martian and Lunar Impact Craters **[#1029]**
We analyzed twelve martian and five lunar complex impact craters regarding their structural rim uplift and ejecta thickness along their final crater rims. Additionally, we reconstructed the transient crater cavity sizes of these craters.

10:00 Osinski G. R. * Grieve R. A. F. Tornabene L. L.
Impact Ejecta Emplacement: Observations from the Terrestrial Planets, the Moon, and Vesta **[#1012]**
Here, we synthesize observations from the terrestrial planets, the Moon, and Vesta, and show that a multi-stage emplacement model for ejecta is most in keeping with the observations on all these planetary objects.

10:15 Zhu M. -H. * Wünnemann K.
Numerical Modeling of Ejecta Distribution and Crater Formation of Large Impact Basins on the Moon **[#1062]**
We present a systematic modeling study of ejecta distribution at large impact basins as a function of impactor size, velocity, crustal thickness, and thermal gradient to predict the thickness, composition, and melt content of the ejecta blanket.

10:30 Quintana S. N. * Schultz P. H.
Using Laboratory Experiments and Computational Modeling to Explain Impact-Related Winds on Mars **[#1040]**
Laboratory experiments and numerical modeling with CTH help to constrain the origin of impact-related wind features observed on Mars.

10:45 DISCUSSION

11:00 *Coffee Break*