Thursday, March 22, 2012
POSTER SESSION II: IMPACT EJECTA: FROM PROXIMAL TO DISTAL
6:00 p.m. Town Center Exhibit Area

Seward L.M. S. Colwell J. E. Mellon M. T. Stemm B. A.
Ejecta Mass Production and Velocities in Low-Energy Impacts into Simulated Lunar Regolith **[#2509]**
We conducted low-velocity impact experiments ~ 1 m/sec into JSC-1 lunar regolith simulant in 1 g and in microgravity. We wish to understand the collision parameters that control the outcome of low-velocity impacts into regolith.

Riis F. Kalleson E. Dypvik H.
Crater Rim Development of the Ritland Impact Structure — Field Observations and Possible Mechanisms **[#1353]**
Parts of the crater rim of the 2.7-km-diameter, Cambrian, Ritland impact structure have been preserved. The rim consists of upturned and elevated basement rocks overlain by brecciated gneiss sheets resting on a thin Cambrian shale.

Kring D. A. Cole S. Craft K. Crites S. Gaither T. Jilly C. Lemelin M. Rosenburg M. Seward L. Song E. Snape J. F. Talpe M. Thaisen K. Veto M. Wielicki M. Williams F. Worsham E. Garber J.
Extensional Faulting of the Overturned Coconino Ejecta Layer and Emplacement of Fallback Breccia at Barringer Meteorite Crater (aka Meteor Crater) **[#1618]**
New sections measured at Meteor Crater indicate the extension of the ejecta blanket was partly accommodated by a series of normal faults. Those normal faults also provided a means of "burying" and protecting fallback ejecta.

Spudis P. D. Baloga S. M. Glaze L. S. Dixit V. Pantone S. M. Juvanescu I.
Radar Scattering and Block Size Properties of Lunar Crater Ejecta from Mini-RF and LROC NAC Data **[#1461]**
Block abundances around lunar craters are measured on LROC images and compared with CPR values derived from the Mini-RF SAR images. CPR tends to increase with increasing blockiness, but the correlation is not simple.

Wulf G. Pietreck A. Kenkmann T.
Ejecta Layer Deposition Chronology of a Double-Layer-Ejecta (DLE) Crater on Mars **[#1744]**
We analyzed the contact zone between the inner and outer ejecta layer of a DLE crater on Mars. The results confirm a successive deposition chronology with the inner ejecta layer overlaying the outer layer.

Sturm S. Wulf G. Jung D. Kenkmann T.
Impact Ejecta Modeling of the Bunte Breccia Deposits of the Ries Impact Crater, Southern Germany **[#1770]**
Here we present new impact ejecta modeling results of the paleo-surface and Bunte breccia ejecta outside the Ries impact crater that provide morphology and thickness variations of the Bunte breccia with increasing distance from the crater center.

Gaither T. A. Hagerty J. J. McHone J. F. Newsom H. E.
Characterization of Impact Ejecta Deposits from Meteor Crater, Arizona **[#1601]**
We present an initial assessment of physical distribution patterns and compositions of impact-generated lithologies from Meteor Crater, Arizona, and announce the availability of the USGS Meteor Crater Sample Collection to the planetary science community.

Artemieva N. Wuennemann K. Stoeffler D. Reimold W. U.
Ries Suevite — Plume Ejecta, Melt Flow or Something Else? **[#1364]**
We present results of numerical modeling applied to various aspects of Ries crater formation and compare the results with observations. We also analyze existing analog models of suevite emplacement.

Bell S. B. Schultz P. H.
Detection of a Radar Signature of the Uprange Plume in Fresh Oblique Lunar Craters **[#2824]**
We report the detection of a radar signature of the uprange plume in fresh oblique lunar craters.

Boyce J. M. Barlow N. G. Wilson L.
Model for the Emplacement of the Outer Ejecta Layer of Low Aspect-Ratio Layer Ejecta Craters by Turbulent Flow **[#1081]**
Our modeling and geomorphic analysis suggest that the outer ejecta layer of low aspect-ratio layer ejecta (LARLE) craters may be fine-grain ejecta deposited from a dilute, suspension-driven, gravity current produced by collapse of the ejecta column.

Alwmark C. Holm S. Meier M. M. M. Hofmann B. A.
A Study of Shocked Quartz in Distal Ries Ejecta from Eastern Switzerland **[#1827]**
Here we confirm the occurence of shocked quartz in the so-called Blockhorizont in eastern Switzerland by measurements and indexing of PDFs. We suggest transportation of material to the present location by ejection during impact.

Shuvalov V. V.
A Mechanism of the Production of Crater Rays **[#1030]**
The goal of this work is to propose and to study a possible mechanism of generation of the crater rays resulting from interaction between an impact induced shock wave in a target and nonuniformities of the target surface.

Carter L. M. Ghent R. R. Bandfield J. L. Bussey D. B. J.
Young, Rayed, and Radar-Bright Craters at the Lunar Poles **[#2485]**
We use radar, infrared, and optical data to study the ejecta patterns, rock abundance, and regolith development surrounding lunar craters. Mini-RF data show previously unknown ejecta features, including a crater ray that crosses Schrödinger Basin.

Artemieva N. Simonson B. M.
Elucidating the Formation of Archean-Proterozoic Boundary Spherule Layers **[#1372]**
We extrapolate the numerical results for K-Pg ejecta to bigger events that occurred around the time of the Archean-Proterozoic boundary. Spherule-rich layers from a minimum of four large impacts have been identified in W. Australia and three in S. Africa.

Ramsley K. R.
The Effects of Gravity on the Morphology and Morphometry of Ejecta and Secondary Craters on the Moon and Mercury **[#1609]**
This study applies a reference template of secondary impact patterns to compare the influence of gravitation in the formation of secondary impact features on the Moon and on Mercury and suggests additional applications of this methodology.

Fernandes V. Artemieva N.
Impact Ejecta Temperature Profile on the Moon — What are the Effects on the Ar-Ar Dating Method? **[#1367]**
Several of the lunar samples dated have demonstrated that there is a decoupling between K-Ar reset ages and their shock-related petrographic features. As shown in our model, temperatures within an ejecta blanket during the early-hot-Moon can be high.