Thursday, March 22, 2018 **[R609]**
POSTER SESSION II: IMPACTS VI: MODELING
6:00 p.m. Town Center Exhibit Area

Kurosawa K. Takada S. ***POSTER LOCATION #154***
An Analytical Model to Predict the Ejecta Velocity Distribution and Transient Crater Radii **[#2513]**
We propose a fully-analytic model to calculate the impact outcomes, including the ejecta velocity distribution and transient crater radii.

Doerfler M. Kenkmann T. ***POSTER LOCATION #155***
Analogue Modeling of the Collapse of an Over-Heightened Central Peak: Clues to the Peak-Ring Formation at Chicxulub? **[#1484]**
Analogue modeling using glass beads combined with particle image velocimetry allow to analyze the kinematics of the gravity collapse of a central peak.

Artemieva N. Morgan J. ***POSTER LOCATION #156***
Fate of Solid Ejecta After the Chicxulub Impact **[#2221]**
The mass of CO_2 released during the impact is ~400 Gt; in addition, twice that mass could be released into the atmosphere during solid ejecta re-entry.

Artemieva N. Shuvalov V. V. ***POSTER LOCATION #157***
Shock Waves on the Surface After Crater-Forming Impacts **[#2251]**
The area of global disruption by atmospheric shock waves is an order of magnitude larger that the crater + ejecta area for craters up to 30 km in diameter.

Caldwell W. K. Hunter A. Plesko C. S. ***POSTER LOCATION #158***
Verification and Validation of the FLAG Hydrocode for Impact Cratering Simulations **[#1251]**
We present results of impact modeling using the FLAG hydrocode. We compare results to those of other hydrocodes, experimental data, and analytical results.

Rufu R. Aharonson O. ***POSTER LOCATION #159***
When Moons Collide: Surface Mixing and Thermal State **[#1175]**
When moons collide, some mantle to the surface arrived, but fewer components survived.

Lock S. J. Stewart S. T. Ćuk M. ***POSTER LOCATION #160***
Earth After the Moon Forming Giant Impact: Accounting for All the Energy **[#1616]**
To calculate energy budget as Earth cools and the Moon recedes, need to account for change in Earth's shape. Amount and style of energy deposition changes.

Kurosawa K. Genda H. ***POSTER LOCATION #161***
The Roles of Friction and Deformation on Impact Heating **[#1970]**
Plastic work in an impact flow due to strength leads to marked decreases in the impact velocities required for the onset of Ar loss and incipient melting.

Silber E. A. Zanetti M. Osinski G. R. Johnson B. C. Grieve R. A. F. ***POSTER LOCATION #162***
A Combined Modeling and Observational Study of the Effect of Impact Velocity on Production of Melt in Simple-to-Complex Lunar Craters **[#1401]**
We use iSALE to model production of melt in transitional craters. We make comparison to observed morphology and morphometry of lunar craters.

Elliott J. R. Pouplin J. ***POSTER LOCATION #163***
A Genetic Optimization Tool for Predicting Lunar Impactor Properties Based on Observed Crater Diameter **[#2577]**
What formed these craters? / Genetic algorithms / Predict impactors.

Kendall J. D. Petro N. E. ***POSTER LOCATION #164***
Formation of Doublet Craters and Herringbone Structures: 3D Hydrocode Modeling **[#2938]**
Using a numerical model, we explore the formation of secondary craters and other unique features due to multiple objects striking a surface simultaneously.

Agrawal V. Ortega A. L. Meiron D. M. ***POSTER LOCATION #165***
Hypervelocity Impact and Dynamic Fragmentation of Brittle Materials **[#1315]**
The process of dynamic fragmentation for brittle materials is studied using finite deformation computational framework.

Suetsugu R. Tanaka H. Kobayashi H. Genda H. ***POSTER LOCATION #166***
Collisions Between Planetesimals in the Gravity Regime with iSALE Code **[#1386]**
Using iSALE code, we perform impact simulations at various numerical resolutions and examine resolution dependence of the critical specific impact energy.

Larson J. Sarid G. ***POSTER LOCATION #167***
One Body, Two Body, Small Body, N-Body: Ejecta Dynamics in the Environment of Single and Binary Asteroids **[#2997]**
One body, two body / Small body, N-body / This one has a little star / This one flew really far / Say! What a lot of bodies there are!

Kegerreis J. A. Eke V. R. Massey R. J. Teodoro L. F. Fryer C. L. et al. ***POSTER LOCATION #168***
Uranus Giant Impacts at High Resolution **[#1886]**
Uranus' remarkable spin was likely caused by a giant impact. We run high-res SPH simulations to study the atmosphere's fate and possible satellite formation.