

Tuesday, August 19, 2008
EXTRATERRESTRIAL CRATERING
10:45 a.m. Hippo Room

Chairs: **Nadine Barlow**
Bill McKinnon

- 10:45 a.m. Marinova M. M. * Aharonson O. Asphaug E.
[*Crustal Consequences of Planetary-Scale Impacts*](#) [#3097]
Planetary-scale impacts on early Mars are investigated, for a wide parameter space. The conclusions focus on melt production, crustal excavation and redistribution, antipodal disruption, escaping and orbiting material, and angular momentum transfer.
- 11:00 a.m. Öhman T. * Aittola M. Kostama V.-P. Korteniemi J. Raitala J.
[*The Control of Target Structure on the Crater Morphology on the Moon, Mars, and Venus — Evidence and Implications*](#) [#3046]
Polygonal impact craters may form by thrusting along pre-existing fault planes. They are preferentially formed in the size range of small to mid-sized complex craters, and may perhaps indicate the presence of basin-induced conjugate shear fractures.
- 11:15 a.m. Fuller M. *
[*The Paleomagnetic Record of Large Meteorite Impacts and Lunar Magnetism*](#) [#3023]
Large meteorite impact related shock appears to play a major role in lunar magnetism. This work uses ground truth from terrestrial impacts and basic rock magnetism techniques to investigate the role of this impact related shock in lunar magnetism.
- 11:30 a.m. Hirata N. * Haruyama J. Ohtake M. Matsunaga T. Yokota Y. Morota T. Honda C. Ogawa Y. Torii M. Sugihara T. Miyamoto H. Demura H. Asada N.
[*Amount and Distribution of Impact Melt of Large Lunar Craters: Views from LISM/Kaguya*](#) [#3060]
The LISM on Kaguya provide high-resolution and multi-spectral mapping data of the Moon. The purpose of this study is to make morphological analyses of those craters with the data from LISM.
- 11:45 a.m. Demura H. * Haruyama J. Ohtake M. Matsunaga T. Yokota Y. Morota T. Honda C. Ogawa Y. Torii M. Hirata N. Asada N. Sugihara T. Saiki K.
[*Photogeological Mapping of Orientale Basin on the Moon, LISM/Kaguya \(SELENE\)*](#) [#3069]
This presentation is a quick report of photogeological mapping of the Orientale Basin on the Moon, LISM/Kaguya (SELENE).
- 12:00 p.m. Louzada K. L. * Stewart S. T.
[*The Effect of Planet Curvature on the Shock Pressure Field Around Martian Impact Basins*](#) [#3101]
We performed a simplified ray path numerical calculation to investigate the effects of curvature on the depth of the interference zone and the pressure field around large impact basins.
- 12:15 p.m. Barlow N. G. * Alzate N.
[*Central Pit Craters on Mars and Ganymede: Characteristics, Distributions, and Implications for Formation Models*](#) [#3071]
Central pit craters on Mars and Ganymede display both similarities and differences. Comparing central pit craters on these two bodies gives us a better understanding of the environmental conditions producing these features and better constrains pit formation models.

12:30 p.m. McKinnon W. B. * Schenk P. M.

[Multiring Basins on Icy Satellites: A Post-Galileo View](#) [#3103]

Icy satellites offer a valuable laboratory to explore multiring basin formation, as icy lithospheres can be quite thin and ring systems quite extensive. Structures on Europa are emphasized, and compared with their much larger cousins on Callisto.

12:45 p.m. Schenk P. M. * McKinnon W. B.

[A Gallery of Multiring Basins on Europa, Ganymede, and Callisto](#) [#3107]

The largest craters on Earth, the other terrestrial planets, and major icy satellites (of Jupiter) possess one or more exterior rings.

1:00 p.m. LUNCH