

Tuesday, March 2, 2010

SPECIAL SESSION: A NEW MOON: LCROSS, CHANDRAYAAN, AND CHANG'E-1 RESULTS
8:30 a.m. Waterway Ballroom 6

Chairs: Alian Wang
Jennifer Heldmann

- 8:30 a.m. Colaprete A. * Ennico K. Wooden D. Shirley M. Heldmann J. Marshall W. Sollitt L. Asphaug E. Korycansky D. Schultz P. Hermalyn B. Galal K. Bart G. D. Goldstein D. Summy D.
[Water and More: An Overview of LCROSS Impact Results](#) [#2335]
 This talk reviews the current results from the LCROSS impact as observed by the instrument suite on the LCROSS Shepherding Spacecraft.
- 8:45 a.m. Heldmann J. L. * Colaprete T. Ennico K. Shirley M. Wooden D. Science Team LCROSS.
[Lunar Crater Observation and Sensing Satellite \(LCROSS\) Mission: Results from the Visible Camera and UV/Visible Spectrometer Aboard the Shepherding Spacecraft](#) [#1015]
 This paper will report on science results from the visible camera and UV-visible spectrometer aboard the LCROSS shepherding spacecraft.
- 9:00 a.m. Wooden D. H. * Colaprete A. Ennico K. Shirley M. H. Heldmann J. L. LCROSS Science Team
[Lunar Crater Observation and Sensing Satellite \(LCROSS\) Mission: Results from the Nadir Near-Infrared Spectrometer Aboard the Shepherding Spacecraft](#) [#2025]
 The nadir-viewing Near-Infrared Spectrometer (1.17–2.45 μm) on the LCROSS Shepherding Spacecraft observed 4 min of the impact plume/curtain from the Centaur impact inside Cabeus Crater. We present identifications of water and other absorption bands.
- 9:15 a.m. Hong P. K. * Sugita S. Okamura N. Sekine Y. Terada H. Takatoh N. Hayano Y. Fuse T. Kawakita H. Wooden D. H. Young E. F. Lucey P. G. Furusho R. Watanabe J. Haruyama J. Nakamura R. Kurosawa K. Hamura T. Kadono T.
[Hot Bands Observation of Water in Ejecta Plume of LCROSS Impact Using the Subaru Telescope](#) [#1939]
 We observed infrared spectra of LCROSS impacts using the Subaru telescope to find H₂O hot band emission lines. Although there was no clear sign of H₂O line detected, the upper limit of H₂O mass is much lower than pre-impact predictions.
- 9:30 a.m. Hayne P. O. * Greenhagen B. T. Paige D. A. Foote M. C. Siegler M. A.
[Diviner Observations of the LCROSS Impact](#) [#2484]
 With its synoptic-scale view of the LCROSS impact site from orbit, combined with excellent sensitivity across a broad range of temperatures, Diviner provides an important set of constraints on the impact process and subsequent evolution.
- 9:45 a.m. Schultz P. H. * Hermalyn B. Colaprete A. Ennico K. Shirley M. LCROSS Team
[Interpreting the LCROSS-EDUS Impact](#) [#2503]
 The LCROSS-EDUS impact excavated material from beneath a permanently shadowed region of the Moon. Here we discuss the results in the context of the impact with implications for the nature and source of buried volatiles.
- 10:00 a.m. Okamura N. * Sugita S. Hong P. K. Kawakita H. Sekine Y. Terada H. Takatoh N. Hayano Y. Fuse T. Wooden D. H. Young E. F. Lucey P. G. Furusho R. Watanabe J. Haruyama J. Nakamura R. Kurosawa K. Hamura T. Kadono T.
[The Estimate of the Amount of Ejecta in LCROSS Mission](#) [#1821]
 Using the Subaru telescope, we observed LCROSS impacts. Although no clear signal of ejecta plume has been detected, an upper limit for the ejecta mass beyond 2.5 km of height is 1000 kg, only 1/20 of a pre-impact theoretical estimate.

- 10:15 a.m. Goswami J. N. *
[An Overview of the Chandrayaan-1 Mission](#) [#1591]
An overview of the Chandrayaan-1 mission, including performance of the eleven payloads, their lunar coverage and examples of salient results from the mission are presented. Chandrayaan-1 mission made important discoveries that provide new insights on lunar evolution.
- 10:30 a.m. Huang Q. * Ping J. S. Wiczorek M. A. Yan J. G. Su X. L.
[Improved Global Lunar Topographic Model by Chang'E-1 Laser Altimetry Data](#) [#1265]
The improved global lunar topographic model, a 360th degree and order spherical harmonic expansion of the lunar shape, is designated as Chang'E-1 Lunar Topography Model s01 (CLTM-s01).
- 10:45 a.m. Jiang J. S. * Wang Z. Z. Zhang X. H. Zhang D. H. Wu J. Li Y. Lei L. Q. Zhang W. G. Cui H. Y. Guo W. Li D. H. Dong X. L. Liu H. G.
[China Probe CE-1 Unveils the World First Moon-Globe Microwave Emission Map — The Microwave Moon: Some Exploration Results of Change'E-1 Microwave Sounder](#) [#1125]
With the data obtained by the China probe Chang'E-1 Lunar Microwave Sounder (CELMS), China has created a Moon globe microwave brightness temperature distribution map, and some new conclusions were drawn from it, which will make the Moon closer to its true nature.
- 11:00 a.m. Ling Z. C. * Zhang J. Zhang W. X. Liu J. J. Zhang G. L. Liu B. Liu J. Z.
[Preliminary Results of Mapping Iron Abundance from Chang'e-1 IIM Data](#) [#2061]
We present a preliminary study to map FeO from Chang'e-1 Imaging Interferometer (IIM) data. As shown by our studies in comparison with Clementine UVVIS results, IIM data exhibit the potential to extract FeO abundance distributions on Moon surface.
- 11:15 a.m. Wu Y. Z. * Tang Z. S.
[Mapping the Absorption Center of the Lunar Minerals: Preliminary Results from CE-1 IIM Data](#) [#1216]
We showed our experience in the use of Chang'E-1 IIM data. We produced the global map of the stagnation point of the Moon with IIM data. This global map can contribute to the lunar research and has some potential to be explored.
- 11:30 a.m. Zhu M. H. Mr. * Chang J. Dr. Ma T. Dr. Xu A. A. Dr.
[Chang'E-1 Gamma-Ray Spectrometer and Its Preliminary Radioactive Results](#) [#1046]
This abstract describes the preliminary radioactive results on the lunar surface from Chang'E-1 gamma-ray spectrometer.