

Friday, March 27, 2009
SEEK OUT AND EXPLORE: UPCOMING AND FUTURE MISSIONS
8:30 a.m. Waterway Ballroom 6

Chairs: **Agustin Chicarro**
Wendy Calvin

- 8:30 a.m. Meyer M. *
[*Mars Science Laboratory in Context*](#) [#2210]
 The Mars Science Laboratory (MSL) is considered the first astrobiology mission since Viking and represents a major step in assessing the preservation potential of martian deposits, opening the window to paleoenvironments and guiding us on what to seek on future missions.
- 8:45 a.m. Vasavada A. R. * MSL Science Team
[*Mars Science Laboratory: Looking Ahead to 2011*](#) [#1441]
 The Mars Science Laboratory, now scheduled for launch in late 2011, retains the next-generation scientific and technological capabilities that make it a critical element in NASA's Mars Exploration Program.
- 9:00 a.m. Newsom H. E. * Ollila A. M. Lanza N. L. King P. Gallegos Z. Osinski G. R. Clegg S. M. Wiens R. C. Vaniman D. Lee P. Glass B. J. Walker E. Thackrey S. Parnell J.
[*Simulated Rover Field Test at the Haughton-Mars Project Impact Crater Field Station*](#) [#1446]
 Initial results from a field test for several Mars Science Laboratory instruments at the Haughton impact structure.
- 9:15 a.m. Chicarro A. F. *
[*MARS-NEXT—A Future Major Step in the European Exploration of Mars*](#) [#1271]
 The Mars-NEXT mission represents a new concept for a three-lander network on Mars within ESA's Exploration Programme, to investigate the interior of the planet, its atmospheric dynamics, and the geology of each landing site.
- 9:30 a.m. Banerdt W. B. *
[*Cerberus: A Mars Geophysical Network Mission for New Frontiers*](#) [#2485]
 We are developing a three-lander mission to Mars carrying geophysical instrumentation that fits within the New Frontiers guidelines. This mission will investigate the deep interior with seismometers, precision tracking and EM sounding.
- 9:45 a.m. Klesh A. T. *
[*SHOTPUT Sample Return: Examining the Compositional Gradient of Small-Body Objects*](#) [#1223]
 A unique trajectory exists that will allow the visiting of 2001 HM10, (624) Hektor and S/2006 and 39/P Oterma. We present a mission design with triple impactors and sample return capability to establish a compositional gradient of small-body objects.
- 10:00 a.m. Colaprete A. Briggs G. Ennico K. Wooden D. Heldmann J. L. Sollitt L. Asphaug E. Korycansky D. Schultz P. Christensen A. Galal K. Bart G. D. LCROSS Team
[*An Overview of the Lunar Crater Observation and Sensing Satellite \(LCROSS\) Mission — An ESMD Mission to Investigate Lunar Polar Hydrogen*](#) [#1861]
 The primary objective of the Lunar Crater Observation and Sensing Satellite (LCROSS) is to confirm the presence or absence of water ice in a permanently shadowed polar region.
- 10:15 a.m. Delory G. T. * Elphic R. Morgan T. Colaprete T. Horanyi M. Mahaffy P. Hine B. Boroson D.
[*The Lunar Atmosphere and Dust Environment Explorer \(LADEE\)*](#) [#2025]
 We describe the Lunar Atmosphere and Dust Environment Explorer (LADEE) mission, designed to study the pristine lunar exosphere and dynamic dust activity.

- 10:30 a.m. Miller R. S. * Bonamente M. Burgess J. M. Jenke P. Lawrence D. J. O'Brien S. Orr M. R. Paciesas W. S. Young C. A.
[*The Lunar Occultation Observer \(LOCO\) — A Nuclear Astrophysics All-Sky Survey Mission Concept*](#) [#1364]
 The Lunar Occultation Observer (LOCO) is a new γ -ray astrophysics mission concept expected to have unprecedented sensitivity in the nuclear regime. Operating in lunar orbit, LOCO will utilize lunar occultation imaging to survey and probe the cosmos.
- 10:45 a.m. Cohen B. A. * Bassler J. A. McDougal J. M. Harris D. W. Hill L. Hammond M. S. Morse B. J. Reed C. L. B. Kirby K. W. Morgan T. H. ILN Science Definition Team MSFC/APL ILN Engineering Team
[*The International Lunar Network \(ILN\) Anchor Nodes Mission Update*](#) [#2021]
 The Anchor Nodes project at MSFC and APL will contribute 2–4 small geophysical stations to the ILN, improving our understanding of lunar interior structure and composition. We report our progress in pre-Phase A science and engineering activities.
- 11:00 a.m. Smith A. * Crawford I. A. Barber S. J. Brown P. Church P. Gao Y. Gowen R. A. Griffiths A. Hagermann A. Joy K. Pike W. T. Phipps A. Proud W. G. Sheridan S. Sims M. R. Talboys D. L. Wells N.
[*MoonLITE Programmatic and Technological Update*](#) [#1508]
 MoonLITE is a proposed four penetrator lunar mission. Following a US/UK working group assessment, a science assessment and the first UK impact trials, a full mission-level phase A study has begun. A technological and programmatic update of the mission is given.
- 11:15 a.m. Weisbin C. R. * Clark P. Shelton K. Smith J. H. Mrozinski J. Lincoln W. Elfes A. Hua H. Adumitroaie V. Silberg R.
[*Formulation, Modeling and Analysis of a Mission to the Moon's Malapert Mountain*](#) [#1054]
 This study analyzes a proposed exploration mission which takes a group of astronauts and their robotic assistants from a landing site at Shackleton Crater near the lunar south pole to Malapert Mountain, which is about 130 km away.
- 11:30 a.m. Lebreton J-P. * Niebur C. Cutts J. Falkner P. Greeley R. Lunine J. Blanc M. Coustenis A. Pappalardo R. Matson D. Clark K. Reh K. Stankov A. Erd C. Beauchamp P.
[*Joint NASA-ESA Outer Planet Mission Study Overview*](#) [#2383]
 This presentation is an overview of the Outer Planet Mission [Europa Jupiter System Mission (EJSM) or Titan Saturn System Mission (TSSM)] selected by NASA and ESA and outlines the next steps toward implementation.