

**Wednesday, October 24, 2012**  
**HUMAN EXPLORATION OF THE MOON AND GAPS IN OUR STRATEGIC KNOWLEDGE**  
**8:30 a.m. Conference Room W150**

*Examination of architectures for the human exploration and strategic knowledge gaps for a Moon first scenario*

**Chairs: Kurt Retherford**  
**Rachel Klima**

- 8:30 a.m. Shearer C. K. \* Members of the GAP-SAT Teams I and II  
[Results of the Lunar Exploration Analysis Group GAP-SAT \(Specific Action Team\) I and II Examination of Strategic Knowledge Gaps for the Moon First Scenario for Human Exploration of the Solar System](#) [#3030]
- 8:45 a.m. Connelly J. \*  
*Alternative Lunar Architectures*
- 9:00 a.m. Rask J. C. \* Zeidler-Erdely P. C. Meighan T. Barger M. W. Wallace W. T. Cooper B. Porter D. W. Tranfield E. M. Taylor L. A. McKay D. S. Castranova V. Liu Y. Loftus D. J.  
[The Chemical Reactivity of Lunar Dust Influences Its Biological Effect](#) [#3037]
- 9:15 a.m. Taylor L. A. \*  
[Water, Water, Everywhere: But How to Find and Use It on the Moon!](#) [#3023]
- 9:30 a.m. Sanders G. B. \* Baird R. S. Rogers K. N. Larson W. E. Quinn J. W. Smith J. E. Colaprete A. Elphic R. C. Picard M.  
[RESOLVE Lunar Ice/Volatile Payload Development and Field Test Status](#) [#3046]
- 9:45 a.m. Heldmann J. L. \* Colaprete A. Elphic R. Mattes G. Ennico K. Fritzler E. Marinova M. McMurray R. Morse S. Roush T. Stoker C.  
[RESOLVE: Real-Time Science Operations to Support a Lunar Polar Volatiles Rover Mission](#) [#3034]
- 10:00 a.m. Cardiff E. H. \*  
[Volatile Extraction and In Situ Resource Utilization for the Moon Applied to Near Earth Objects](#) [#3041]
- 10:15 a.m. BREAK
- 10:30 a.m. Lester D. F. Valinia A. \* Thronson H. Schmidt G.  
[The First Exploration Telerobotics Symposium — Telepresence: A New Paradigm for Human-Robotic Cooperation](#) [#3012]
- 10:45 a.m. Klaus K. \* Post K. Lawrence S. J.  
[A Sustainable Architecture for Lunar Resource Prospecting from an EML-Based Exploration Platform](#) [#3009]
- 11:00 a.m. Alkalai L. \* Solish B. Willott J. O. Mueller J. McElrath T. Parker J.  
[ORION/MoonRise: A Human and Robotic Sample Return Mission Concept from the South Pole-Aitken Basin](#) [#3053]
- 11:15 a.m. Cox R. \* Clark P. Vasant A. Meinke R.  
[Gateways to the Solar System: Innovative Advanced Magnet Lab Mass Driver Launch Platforms at L1 and L2](#) [#3007]

11:30 a.m. Kelso R. M. \* Hamilton J. C. Andersen C.  
[\*Lunar Concrete — Using Analogue Test Sites on the Big Island of Hawai'i for "Dust-to-Bricks": Demonstration of Technologies Associated with Basalt/Regolith Material Processing/Fabrication/Construction\*](#) [#3011]

11:45 a.m. DISCUSSION