

Friday, October 24, 2014
FUTURE EXPLORATION: STRATEGIES AND OPPORTUNITIES
1:30 p.m. Bldg. 200, Room 100

Chairs: Clive Neal
Benjamin Greenhagen

- 1:30 p.m. Klaus K. *
[*The Space Launch System and the Proving Ground: Pathways to Mars*](#) [#3014]
The SLS provides a critical heavy-lift launch capability enabling diverse deep space missions including human exploration, planetary science, astrophysics, heliophysics, planetary defense, and commercial space exploration.
- 1:45 p.m. Huber S. A. Thornton J. P. * Hendrickson D. H.
[*Astrobotic Technology: Commercial Lunar Payload Delivery Service*](#) [#3063]
This paper describes Astrobotic Technology's financial and technical model for delivery of commercial lunar landing capabilities through government partnership.
- 2:00 p.m. Greenhagen B. T. * Donaldson Hanna K. L. Thomas I. R. Bowles N. E. Allen C. C. Pieters C. M. Paige D. A.
[*The Benefits of Sample Return: Connecting Apollo Soils and Diviner Lunar Radiometer Remote Sensing Data*](#) [#3067]
Here we present a comprehensive study to reproduce an accurate simulated lunar environment, evaluate the most appropriate sample and measurement conditions, collect thermal infrared spectra of Apollo soils, and correlate them with Diviner observations.
- 2:15 p.m. Shearer C. K. * Lawrence S. Jolliff B. L.
[*Robotic Sample Return I. Advancing our understanding of Planetary Differentiation*](#) [#3041]
We examine the role of lunar SR for advancing our knowledge of the early differentiation of the Moon and other planetary bodies.
- 2:45 p.m. Lawrence S. J. * Jolliff B. L. Shearer C. Robinson M. S. Stopar J. D. Braden S. E. Speyerer E. J. Hagerty J. T. Denevi B. W. Neal C. R. Draper D. S.
[*Robotic Sample Return II: Addressing Fundamental Exploration Themes*](#) [#3062]
A campaign of automated sample return to specific locations identified by recent mission results as a critical aspect of an integrated exploration strategy is discussed; specific ROIs are identified to inform future hardware choices.
- 3:05 p.m. Shearer C. K. * Neal C. R. Jolliff B. L. Wiczorek M. A. Mackwell S.
[*A New Moon. An Initiative to Integrate new Lunar Information into our Fundamental Understanding of the Moon and the next Stages of Lunar Exploration*](#) [#3040]
We propose a new initiative that will integrate recent mission observations into producing a richer understanding of the Moon, revealing new clues about the history of the solar system, and providing new information for renewed lunar exploration.
- 3:35 p.m. DISCUSSION