Tuesday, October 20, 2015
CURRENT AND RECENT MISSION UPDATES AND STRATEGIES FOR FUTURE LUNAR EXPLORATION AND SCIENCE
1:30 p.m. USRA Conference Center

Status of current and recent lunar missions will be presented along with strategies for future lunar exploration and science.

Chairs: **Noah Petro**
Mark Robinson

1:30 p.m. Elphic R. *
LADEE Results: Implications for Exploration and Sciences **[#2083]**
The LADEE mission gathered information on the Moon's tenuous gas and dust exosphere, with some surprising results. The solar wind and meteoroid streams play a role in sustaining both.

1:45 p.m. Poppe A. R. * Halekas J. S. Fatemi S. Delory G. T.
ARTEMIS' Perspective on a Dynamic Moon **[#2032]**
We report on the dynamic nature of lunar-plasma interactions using recent observations by the twin-probe ARTEMIS spacecraft.

2:00 p.m. Petro N. E. * Keller J. W.
The Lunar Reconnaissance Orbiter: Revolutionizing Our Understanding of the Dynamics of Planets and the Role of Volatiles in the Solar System **[#2062]**
LRO is producing a dataset unrivaled in planetary science. With an increasing baseline of measurements, LRO data has revealed the Moon's surface and environment to be dynamic. The LRO dataset has value in forming how we understand the solar system.

2:15 p.m. Keller J. W. * Petro N. E.
Future Exploration of the Moon Enabled by the Lunar Reconnaissance Orbiter **[#2080]**
LRO data is a resource for planning missions to the Moon, including locating landing sites, resources, and planning of traverses. We will discuss this and future targeting of areas of exploration.

2:30 p.m. DISCUSSION

3:00 p.m. Spudis P. D. *
A Robotic Prospecting Architecture for the Moon **[#2022]**
A variety of robotic missions are needed to characterize the deposits and environment of the lunar poles prior to resource exploitation. I describe a sequence of missions, measurements, and instruments to obtain this critical strategic information.

3:15 p.m. Robinson M. S. *
A Focused Path to Extend Human Presence Beyond Low Earth Orbit **[#2082]**
Developing a sustainable long-term architecture to move humans out of low Earth orbit and into the solar system requires a focused path built around a series of achievable objectives within a structured time frame.

3:30 p.m. Plescia J. B. * Schmitt H. H.
The Moon's Role in Human Exploration of the Solar System **[#2043]**
Cislunar space and the surface provide the chance to conduct space science and allows us to test systems and operations prior to deep space missions, to extract resources, and to demonstrate U.S. national interest and serve as a source of inspiration.

3:45 p.m. Gruener J. E. * Suzuki N. H. Carpenter J. D.
International Coordination of Lunar Polar Volatiles Exploration **[#2033]**
The International Space Exploration Coordination Group (ISECG) has established a study team to coordinate the worldwide interest in lunar polar volatiles, and in particular water ice, in an effort to stimulate cooperation and collaboration.

4:00 p.m. Kelso R. M. *
MoonRIDERS: NASA and Hawaii's Lunar Surface Flight Experiment for Late 2016 **[#2001]**
This briefing will update the MoonRIDERS lunar surface flight experiment project between NASA-KSC, PISCES, and two Hawaii high schools investigating critical lunar dust-removal technologies. Launch planned in early 2017 on GLXP mission.

4:15 p.m. Beldavs V. Z. Dunlop D. * Crisafulli J. Foing B.
The International Lunar Decade — 2017–2029: Framework for Concurrent Development of Enabling Technologies, Infrastructures, Financings, and Policies for Lunar Development **[#2055]**
The International Lunar Decade (ILD) planned for launch in 2017 provides a framework for long-term international collaboration in the development of technologies, infrastructures, and financing mechanisms for lunar development.

4:30 p.m. DISCUSSION