Wednesday, May 25, 2016
LUNAR EXOSPHERE AND SPACE WEATHERING
1:30 p.m. Lecture Hall

Chairs: **Brett Denevi**
William Farrell

1:30 p.m. Horanyi M. * Szalay J. Gruen E. Glenar D. Wang X. Zakharov A.
The Dust Environment of the Moon **[#6005]**
We will briefly review the history of the observations of the lunar dust environment, but mainly focus on the results of the LADEE mission, and the recent laboratory results on the charging and mobilization of dust particles on regolith surfaces.

1:45 p.m. Elphic R. C. Horanyi M. Colaprete A. Benna M. Mahaffy P. R. Delory G. T. Noble S. K. Halekas J. S. Hurley D. M. * Stubbs T. J. Sarantos M. Kempf S. Poppe A. Szalay J. Sternovsky Z. Cooke A. M. Wooden D. H. Glenar D.
The Lunar Gas and Dust Exosphere as Revealed by the LADEE Mission **[#6022]**
The Lunar Atmosphere and Dust Environment Explorer mission acquired unprecedented coverage of the composition, structure and variability of the Moon's gas and dust exosphere.

2:00 p.m. Farrell W. M. * Halekas J. S. Killen R. M. Collier M. R. Hurley D. H. Colaprete A. Elphic R. C. Mahaffey P. R. Benna M.
Astounding New Aspects to the Lunar Exosphere **[#6052]**
We describe very exciting advances in exospheric research since the last NVM book in 2006.

2:15 p.m. Sarantos M. * Colaprete A. Szalay J. McLain J. L. Wooden D. H. Poppe A.
How Exospheric Sodium and Potassium Migrate on the Moon: The View from LADEE **[#6053]**
LADEE data and models enable us to quantify in unprecedented detail how Na and K gases are generated and how they migrate on the surface of the Moon.

2:30 p.m. Fatemi S. * Poppe A. R. Halekas J. S. Delory G. T. Holmstrom M. Farrell W. M.
Kinetic Modeling of the Moon-Solar Wind Plasma Interaction **[#6072]**
We use a three-dimensional self-consistent hybrid model of plasma (kinetic ions, fluid electrons) to study solar wind plasma interaction with the Moon. We have studied lunar wake, interaction with crustal fields, and lunar interior with our model.

2:45 p.m. Kramer G. Y. *
Space Weathering Dominated by Solar Wind at Earth-Moon Distance **[#6026]**
Micrometeorites and solar wind ions are largely responsible for weathering the surfaces of airless bodies. But which dominates? The lunar swirls demonstrate the dominance of the solar wind on space weathering, at least at the Earth-Moon distance.

3:00 p.m. Break

3:15 p.m. Keller L. P. * Zhang S.
Space Weathering Rates in Lunar Soils **[#6030]**
We use to solar flare track densities in individual lunar soil grains to constrain the rate of space weathering.

3:30 p.m. Greenhagen B. T. * Lucey P. G. Glotch T. D. Arnold J. A. Bandfield J. L. Bowles N. E. Donaldson Hanna K. L. Hayne P. O. Lemelin M. Shirley K. A. Song E. Paige D. A.
Space Weathering in the Thermal Infrared: Lessons from LRO Diviner **[#6063]**
Before LRO, it was suggested that TIR spectroscopy would be less susceptible to the effects of space weathering. Diviner has shown the TIR is affected by space weathering. We will discuss this unanticipated space weathering dependence.

3:45 p.m. Cahill J. T. S. * Lawrence D. J. Delen O. Stickle A. M. Raney R. K. Patterson G. W. Greenhagen B. T.
Examining Lunar Regolith Maturation at a Deeper Level **[#6076]**
Taking a look at lunar non-polar regolith maturation across data sets.

4:00 p.m. Monitored by Session Chairs
3-Minute Lightning Round of New Data and Perspectives

4:15 p.m. DISCUSSION