

Tuesday, March 18, 2014

[T201]

**SPECIAL SESSION: LUNAR DUST AND EXOSPHERE
FEATURING THE FIRST RESULTS FROM LADEE
8:30 a.m. Waterway Ballroom 1**

**Chairs: Richard Elphic
Andrew Poppe**

- 8:30 a.m. Elphic R. C. * Hine B. Delory G. T. Salute J. S. Noble S. et al.
[*The Lunar Atmosphere and Dust Environment Explorer \(LADEE\): Initial Science Results*](#) [#2677]
LADEE is making measurements of the tenuous lunar exosphere and the dust cloud from meteoroid impacts.
- 8:45 a.m. Glenar D. A. * Stubbs T. J. Elphic R.
[*LADEE Search for a Dust Exosphere: A Historical Perspective*](#) [#2640]
The LADEE search for a dust exosphere is discussed in the context of recent dust upper-limit measurements.
- 9:00 a.m. Horanyi M. * Gagnard S. Gathright D. Gruen E. James D. et al.
[*The Dust Environment of the Moon as Seen by the Lunar Dust Experiment \(LDEX\)*](#) [#1303]
The Lunar Dust Experiment (LDEX) onboard the LADEE mission continues to make observations in lunar orbit since its cover was deployed on 10/16/2013.
- 9:15 a.m. Kempf S. * Grün E. Horanyi M. James D. Lankton M. et al.
[*Observations of the Lunar Dust Exosphere with LDEX*](#) [#1389]
This talk will report about first insights into the properties of the lunar dust exosphere based on a preliminary analysis of the LDEX data.
- 9:30 a.m. Stubbs T. J. * Glenar D. A. Wang Y. Hermalyn B. Sarantos M. et al.
[*The Impact of Meteoroid Streams on the Lunar Atmosphere and Dust Environment During the LADEE Mission*](#) [#2705]
We describe the 18 annual meteoroid streams predicted to encounter the Moon during the LADEE mission, and discuss the implications for the lunar environment.
- 9:45 a.m. Halekas J. S. * Poppe A. R. Delory G. T. Elphic R. C. Angelopoulos V. et al.
[*ARTEMIS Observations and Data-Based Modeling in Support of LADEE*](#) [#1548]
Plasma processes influence the lunar exosphere and its structure and variability. We utilize ARTEMIS data and data-based modeling to provide inputs for LADEE.
- 10:00 a.m. Szalay J. R. * Horanyi M. Poppe A. R. Halekas J. S.
[*LDEX Observations and Correlations with ARTEMIS Measurements*](#) [#1500]
This presentation will focus on the correlations between LDEX and ARTEMIS data.
- 10:15 a.m. Poppe A. R. * Halekas J. S. Szalay J. R. Horanyi M. Delory G. T.
[*Model-Data Comparisons of LADEE/LDEX Observations of Low-Energy Lunar Dayside Ions*](#) [#1393]
We model the response of the LADEE/LDEX instrument to low-energy lunar dayside ions and discuss implications for the lunar exo- and ionosphere.
- 10:30 a.m. Benna M. * Mahaffy P. R. Hodges R. R.
[*Early Results from Exospheric Observations by the Neutral Mass Spectrometer \(NMS\)*](#) [#1535]
We present early observations of He, Ar, and Ne observations from the LADEE NMS orbit.

- 10:45 a.m. Colaprete A. * Elphic R. C. Landis D. Karcz J. Shirley M. et al.
[Overview of the LADEE Ultraviolet-Visible Spectrometer: Design, Operations, and Initial Results](#) [#2566]
This talk will overview the design, performance, and initial results of the LADEE UVS instrument.
- 11:00 a.m. Hermalyn B. * Colaprete A. Elphic R. C. Landis D. Karcz J. et al.
[Impact Lofted Ejecta Contribution to the Lunar Exosphere: Experiments and Results from the LADEE Ultraviolet Visible Spectrometer](#) [#2518]
This study presents preliminary results of lunar limb observations from the UVS on LADEE toward understanding the impact contribution to the dust exosphere.
- 11:15 a.m. Wooden D. H. * Cook A. M. Colaprete A. Shirley M. H. Vargo K. E. et al.
[LADEE UVS Observation of Solar Occultation by Exospheric Dust Above the Lunar Limb](#) [#2123]
LADEE UVS solar occultation measurements (40–0 km altitudes) reveal spectral signatures of forward scattering and absorption by dust in the lunar exosphere.
- 11:30 a.m. Hurley D. M. * Benna M. Mahaffy P. R. Elphic R. C. Colaprete A. et al.
[Upper Limits on the Propagation of Constituents of the Chang'e-3 Exhaust Plume from LADEE Observations](#) [#2160]
Examining the LADEE observations during the day of the Chang'e-3 landing for the presence of the rocket exhaust plume and comparing to model simulations.