

Thursday, March 22, 2018
POSTER SESSION II: LUNAR EXTERIOR VOLATILES
6:00 p.m. Town Center Exhibit Area

[R617]

Ito R. Inoue H. Ohtake M. Ishihara Y. Ootake H. et al. **POSTER LOCATION #292**
[Shadow Detection from Multiband Imager via Conditional Generative Adversarial Network](#) [#1088]

The aim of this study is to enable the detection of smaller dark mantle deposits on the global lunar surface from MI images with masked shadow regions.

Yoldi Z. Pommerol A. Poch O. Jost B. Thomas N. **POSTER LOCATION #293**
[Laboratory Reflectance Measurements of Ice and Dust Mixtures. Application to Permanently Shaded Regions on the Moon and Mercury.](#) [#2207]

We have conducted reflectance measurements of ice and JSC-1AF mixtures to assess the presence and concentration of water ice in the PSRs of the Moon and Mercury.

Jordan A. P. Wilson J. K. Schwadron N. A. Spence H. E. Petro N. **POSTER LOCATION #294**
[Toward a History of the Moon's Ice Caps: Synthesizing Surface and Subsurface Measurements](#) [#1634]

The lunar ice caps extend to about $\pm 70^\circ$ latitude; differences between surface and subsurface ice cap data may help determine the history of the ice.

Nakauchi Y. Abe M. Matsumoto T. Kitazato K. Tsuchiyama A. **POSTER LOCATION #295**
[An Experimental Investigation of Thermal Stability of OH/H₂O Formed by Solar Wind Implantation on Lunar Surface](#) [#2218]

We measured reflectance spectra at the various temperature after proton irradiation to olivine. OH/H₂O formed by proton irradiation can exist at ~ 370 K or less.

Wang H. Z. Zhang J. Shi Q. Q. Khurana K. K. Rae I. J. et al. **POSTER LOCATION #296**
[Spatial Variation of Lunar Surface Hydration and the Implications for Its Sources: Solar/Earth Winds or Others](#) [#2066]

We studied lunar surface hydration in the polar regions, and correlated its variations with incident ion flux when the Moon is inside/outside the magnetosphere.

Powell T. P. Greenhagen B. T. Taylor S. Williams J. P. Hayne P. O. et al. **POSTER LOCATION #297**
[Lunar Cold Spot Properties and Degradation](#) [#1829]

Cold spots on the Moon // vary spatially a lot // and fade pretty quick.

Fayolle E. C. Noell A. C. Hodyss R. Johnson P. V. **POSTER LOCATION #298**
[Sublimation Rate of Volatiles in Pure and Mixed Ices](#) [#2805]

We experimentally measure the sublimation rate of icy volatiles for pure ice and mixed with water at cryogenic temperatures relevant to solar system bodies.

de Wet W. C. Zaman F. Townsend L. W. Schwadron N. A. Wilson J. K. et al. **POSTER LOCATION #299**
[The Effects of Hydrogenated Surface Layers in Lunar Regolith on Galactic Cosmic Ray Induced Proton Albedo Yields](#) [#2312]

This is a study of the effects of hydrogenated surface layers in lunar regolith on albedo proton yield as a function of emission angle and layer depth.

Necsoiu M. Patrick E. Hooper D. Ximenes S. **POSTER LOCATION #300**
[What Lies Beneath: Pursuing the Virtual Surface Binding the Lunar Exosphere](#) [#1044]

Lunar Advanced Vacuum Apparatus leverages our knowledge of spectroscopy of minerals, simulants, and lunar materials, with decades of experience in UHV systems.

Luchsinger K. M. Chanover N. J. Strycker P. D.

POSTER LOCATION #301

[Digging Deeper: Further Analysis and Modelling of the LCROSS Debris Plume](#) [#2855]

Further modeling of the LCROSS debris plume as detected with the Astrophysical Research Consortium 3.5 m telescope at Apache Point Observatory.

Honniball C. I. Lucey P. G. Li S. Hibbitts K.

POSTER LOCATION #302

[Measurement Requirements and Instrument Performance for Remote Measurements of Lunar Surface Water Abundance and Variation Using the 6 Microns Water Absorption](#) [#1808]

Lunar molecular water can be unambiguously detected with a spectrometer operating at 6 μm . We show such an instrument is feasible with a modest camera.

Roux V. G. Roth M. C. Miller S. A.

POSTER LOCATION #303

[A Comparison of Volatile Release Rates During a Simulated Extraction from Lunar Ice Mixed with Highland or Mare Regolith](#) [#1815]

The extraction rates of volatiles from simulated lunar ice mixed with Highland and Mare regolith simulants are compared with recommendations for future work.