

Tuesday, March 20, 2018

[T322]

**POSTER SESSION I: LUNAR REMOTE SENSING: LOOK BUT DON'T TOUCH!****6:00 p.m. Town Center Exhibit Area**

Robertson K. M. Li S. Milliken R. E. Pieters C. M. Isaacson P. **POSTER LOCATION #250**  
[\*Radiative Transfer Modeling of Ilmenite in Lunar Basalts, Physical Mixtures, and Implications for Mapping of Titanium on the Moon\*](#) [#1968]

We apply Hapke radiative transfer models to spectra of lunar high-Ti basalts and synthetic ilmenite-pyroxene mixtures to constrain their spectral properties.

Hapke B. Sato H. **POSTER LOCATION #251**  
[\*A LROC WAC Algorithm for TiO<sub>2</sub> Abundances in the Lunar Highlands and Low-Ti Maria\*](#) [#1194]

It is shown that the ratio of the reflectance in band 4 (565 nm) to band 7 (690 nm) of LROC WAC data provides an algorithm for the TiO<sub>2</sub> abundance of low-Ti terrains.

Tokle L. Robertson K. M. Milliken R. E. **POSTER LOCATION #252**  
[\*Development of an Fe-Mg Compositional Calibration for the Ilmenite — Geikielite Solid-Solution Using XRD and Reflective Spectroscopy\*](#) [#2095]

Fe-Mg compositional calibration for ilmenite using XRD and reflective spectroscopy.

Bondarenko N. V. Dulova I. A. Kornienko Yu. V. **POSTER LOCATION #253**  
[\*High-Resolution Albedo and Relief of the Lunar Surface with the Improved Photoclinometry Method for the Topography Reconstruction from a Set of Images\*](#) [#2459]

The improved photoclinometry method disentangles albedo and heights variations. We apply this method to high-resolution LROC images in Mare Imbrium on the Moon.

Shirley K. A. McDougall D. S. Glotch T. D. **POSTER LOCATION #254**  
[\*The Effect of Albedo on Mid-Infrared Spectra of Airless Bodies with Implications for Diviner Data Analysis\*](#) [#1298]

Darker rocks will change / MIR spectral features / Watch out Diviner!

Mazarico E. Barker M. K. **POSTER LOCATION #255**  
[\*New Developments in Modeling of Illumination Conditions, at the Moon and Beyond\*](#) [#2801]

We describe the capabilities of our illumination modeling tool, and present a variety of applications for instrument calibration and data analysis.

Hong S. A. Jeong M. Sim C. K. **POSTER LOCATION #257**  
[\*Determination of Maximum Polarization as a Prior Study of KPL/PolCam\*](#) [#2725]

The empirical fitting formula for the maximum polarization has been investigated, the reliability of Pmax obtained from sparse distribution of the phase angle.

Barker M. K. Mazarico E. Smith D. E. Sun X. Zuber M. T. et al. **POSTER LOCATION #258**  
[\*High-Phase Angle Photometric Observations of the Moon with the Lunar Orbiter Laser Altimeter\*](#) [#1259]

Unique high-phase angle photometric measurements of the lunar regolith to better understand surface properties like composition, roughness, and porosity.

Kato S. Morota T. Sei-ichiro S. Ohtake M. Nimura T. **POSTER LOCATION #259**  
[\*Construction of New Restricted Gaussian Model to Derive Modal Mineralogy and Elemental Composition from Spectral Data\*](#) [#1797]

We revised the Modified Gaussian Model by reevaluating the correlation between Gaussian parameters and chemical compositions and formulate the relation.

Ji J. Z. Liu J. Z. Head J. W. III Pieters C. M. Lin H. L. **POSTER LOCATION #260**  
[\*Quantitative Analysis of Minerals Across the Orientale Basin on the Moon\*](#) [#2068]

Using a quantitative analysis method, combining the Hapke model with a sparse unmixing algorithm, to get the minerals and their abundance at Orientale basin.

- Lucey P. G. Honniball C. I. Costello E. S. Brennan R.  
Sandford M. et al. **POSTER LOCATION #261**  
[Multispectral Polarization Measurements of Eight Lunar Soils](#) [#1718]  
Multispectral polarization measurements at 430, 636, and 760 nm were made of eight lunar soils spanning a wide range of composition and maturity.
- Shusterman M. L. Wing B. R. Klima R. L. Hibbitts C. A. Izenberg N. R. **POSTER LOCATION #262**  
[Temperature-Dependent Spectral Observations of Pyroxene Powders](#) [#2489]  
Pyroxene minerals evaluated in the NIR indicate that temperature variations may replicate the shifts in band positions caused by elemental substitutions.
- Ohtake M. Yamamoto S. Morota T. Kato S. **POSTER LOCATION #263**  
[Mg# Estimation of Possible Mantle Olivine on the Moon](#) [#1800]  
We tried to estimate Mg# (Mg/(Mg+Fe) in mole per cent) of possible mantle olivine found on the Moon to discuss Mg# of the lunar material.
- Yang Y. Milliken R. E. Patterson W. R. Bramble M. S.  
Donaldson Hanna K. L. et al. **POSTER LOCATION #264**  
[Data Reduction of FTIR Thermal Emission Measurements Under Cold Vacuum Conditions: Processing of Interferograms vs. Spectra](#) [#1803]  
Here we present results for different data processing methods to derive emissivity spectra from measurements made under vacuum and varied temperature conditions.
- Yang Y. Li S. Milliken R. E. Robertson K. Hiroi T. et al. **POSTER LOCATION #265**  
[Particle Phase Functions of Typical Lunar Minerals Derived from Photometric Spectral Measurements](#) [#1784]  
Here we report the results of our spectro-photometric measurements on typical lunar minerals, including ilmenite, over a wavelength range of 0.4 to 2.6  $\mu\text{m}$ .
- Basu Sarbadhikari A. Ghosh J. Narendranath S. **POSTER LOCATION #266**  
[Alkali-Rich Rocks At and Near Tycho Crater of the Moon](#) [#1980]  
Rocks at the Tycho Crater analyzed by C1XS are silica-depleted and alkali-rich; classification based on normative calculation indicates nepheline troctolite.
- Wang J. T. Liu J. Z. **POSTER LOCATION #267**  
[The Surface Roughness of the Moon: A Quantitative Method to Represent Impact Crater Materials' Characteristic](#) [#2404]  
Study the quantitative method to represent impact materials' characteristic, and first concern on the surface roughness.
- Sato H. Denevi B. W. Hapke B. Robinson M. S. Otake H. **POSTER LOCATION #268**  
[North Polar Color Mosaic of the Moon Acquired by LROC WAC](#) [#1511]  
We derived a seven-color mosaic of the north pole from LROC WAC observations. Using the new mosaic, we examined the existence of the latitudinal color trend.