Thursday, March 24, 2016 **[R634]**
POSTER SESSION II: LUNAR DATA RESTORATION, ARCHIVING, AND ANALYTICAL TOOL DEVELOPMENT
6:00 p.m. Town Center Exhibit Area

Lehnert K. A. Cai Y. Mana S. Todd N. S. Zeigler R. A. et al. ***POSTER LOCATION #501***
MoonDB: Restoration and Synthesis of Lunar Petrological and Geochemical Data **[#2738]**
We report the progress of MoonDB, a NASA-funded project to construct a digitally searchable database of geochemical and petrological data of lunar samples.

Zhang G.-L. Li C.-L. Zuo W. Liu B. Zhou Q. et al. ***POSTER LOCATION #502***
Preparation and Analysis Process for Future Returned Lunar Samples and Verification Results for Simulation Experiment **[#1291]**
How to prepare lunar returned samples and how to avoid Earth environment contamination and oxidation are future directions for studying lunar returned samples.

Todd N. S. Zeigler R. A. Evans C. A. Lehnert K. A. ***POSTER LOCATION #503***
Rescue and Preservation of Sample Data from the Apollo Missions to the Moon **[#2988]**
Discusses challenges involved in managing Apollo sample curation data and the data preservation initiatives implemented by NASA's Astromaterials Curation.

Williams D. R. Hills H. K. Taylor P. T. Grayzeck E. J. Guinness E. A. ***POSTER LOCATION #504***
Restoration of Apollo Data by the Lunar Data Project / PDS Lunar Data Node: An Update **[#2385]**
We report on the progress and status of the Apollo data restorations being undertaken by the Lunar Data Project and the PDS Lunar Data Node at the NSSDCA.

Nagihara S. Nakamura Y. Williams D. R.
Taylor P. T. Kiefer W. S. et al. ***POSTER LOCATION #505***
Availability of Previously Unprocessed ALSEP Raw Instrument Data and Derivative Data and Metadata Products **[#1194]**
We report availability of the ALSEP raw instrument data recovered from the original archival tapes found in 2010 and derivative data and metadata products.

Ito G. Glotch T. D. ***POSTER LOCATION #506***
Exploring the Use of T-Matrix/Radiative Transfer Hybrid Models for Fine Planetary Particulates in the Mid-Infrared **[#1962]**
We compute emissivity spectra of enstatite particulates using T-matrix and radiative transfer hybrid models to better capture particle size effect on spectra.

Shirley K. A. Glotch T. D. ***POSTER LOCATION #507***
Particle Size Effects on Mid-IR Emission Spectra of Silicates in a Simulated Lunar Environment **[#2552]**
Grain size effects on / Simulated Moon spectra / Make shifting features.

Warren T. Thomas I. Arnold J. Donaldson Hanna K. Bowles N. ***POSTER LOCATION #508***
Investigating Surface Roughness Effects on the Directional Emissivity of Surfaces Using the Oxford Space Environment Goniometer **[#2114]**
Measurements of Directional Emissivity in the thermal and far infra-red of rough surfaces.

Greenhagen B. T. Donaldson Hanna K. L. Thomas I. R.
Bowles N. E. Allen C. C. et al. ***POSTER LOCATION #509***
Connecting Simulated Lunar Environment Chamber Measurements to Diviner Lunar Radiometer Observations **[#2363]**
We use Simulated Lunar Environment Chamber measurements of lunar soils to "ground truth" Diviner Lunar Radiometer compositional and thermophysical data.

Temme R. L. Strycker P. D. Chanover N. J. Hamilton R. T. Miller C. ***POSTER LOCATION #510***
Comparisons of Data Reduction Methods for Impact Plume Detection in LCROSS Time Series Observations from MRO **[#1166]**
We apply PCA filtering to two LCROSS time series acquired from MRO to detect plume ejecta and compare data reduction methods through plume brightness curves.

Gyalay S. Aye M. Paige D. A. ***POSTER LOCATION #511***
LRO Diviner Nonlinear Detector Response Correction **[#2641]**
With proper assumptions, we can correct the nonlinear detector response of LRO Diviner to produce more accurate lunar brightness temperature results.

Zhang Z. B. Zuo W. Li C. L. Zou Y. L. Zhang G. L. et al. ***POSTER LOCATION #512***
Detecting Craters on Lunar Surface Using an AdaBoost Method **[#1335]**
A two-stage method detecting craters automatically from optical images, which can be used in dating by crater counting to infer the lunar geological history.

Yang H. W. Zhao W. J. Wu Z. H. ***POSTER LOCATION #513***
Matlab Program to Construct Bouguer Gravity Anomaly Field Using Ultra High Degree Spherical Harmonic Coefficients **[#1400]**
Matlab codes to calculate ultra high degree spherical harmonic expansion of lunar gravity and to construct Bouguer gravity anomaly field of the Moon.

Bondarenko N. V. Dulova I. A. Kornienko Yu. V. ***POSTER LOCATION #514***
Improved Photoclinometry Method: Topography of the Lunar Surface Area in Mare Imbrium from a Set of Images **[#1860]**
The improved photoclinometry method for relief retrieval from images allows reconstruction of the detailed topography for small craters on the lunar surface.

Chang S. Q. Huang Y. Li P. J. Hu X. G. ***POSTER LOCATION #515***
The Use of Laser Altimetry in the Orbit Determination of Chang'e-1 **[#1498]**
Altimetry from the CE-1 laser altimeter has been analyzed in this work. The result will be helpful to recomputed CE-1 ephemeris to improve topography model.

Haruyama J. Tsubouchi A. Shinoda R. Miyake W. ***POSTER LOCATION #516***
Validation of SELENE (Kaguya) Terrain Camera Digital Elevation Model at the Apollo LRRR Locations **[#1819]**
We report validation results for DEM_TCOrtho where Lunar Laser Ranging Retro Reflectors (LRRR) were installed on Apollo missions.

Hareyama M. Ishihara Y. Ohtake M. Honda C. Morota T. et al. ***POSTER LOCATION #517***
Unsupervised Classification of Lunar Surface Spectrum Obtained by Kaguya (SELENE) Spectral Profiler **[#1390]**
A result of automatic classification of lunar reflectance spectra observed by Kaguya SP is presented with the aim of making a global geological map.

Kouyama T. Yokota Y. Ishihara Y. Nakamura R. Yamamoto S. et al. ***POSTER LOCATION #518***
Lunar Calibration for Planetary Explorers Using SELENE/SP Lunar Reflectance Model **[#1723]**
Simulating Moon observations by Hayabusa/AMICA and Hayabusa2/ONC-T using SELENE/SP lunar reflectance model, and comparing observed and simulated irradiance.