

Thursday, March 24, 2016

[R642]

POSTER SESSION II: TECHNICAL ADVANCES IN MEASUREMENTS AND ANALYSIS

6:00 p.m. Town Center Exhibit Area

Pravdivtseva O. Meshik A. Hohenberg C. M. *POSTER LOCATION #620*
[Re-Evaluation of the Absolute Closure Age of the I-Xe Standard Shallowater: Implications for the 129I Half-Life Value](#) [#1711]

The absolute closure age of Shallowater is reevaluated with the addition of the new data and U-ratio adjusted Pb-Pb ages, suggested value is 4562.4+/-0.2 Ma.

Papanastassiou D. A. Chen J. H. *POSTER LOCATION #621*
[Initial ⁸⁷Sr/⁸⁶Sr Chronology in the Solar System](#) [#2650]

⁸⁷Sr/⁸⁶Sr and ⁸⁴Sr/⁸⁶Sr ratios in meteorites address the question of potential ⁸⁴Sr anomalies invalidate a fine resolution chronology based on initial ⁸⁷Sr/⁸⁶Sr.

Chen X. Lapen T. J. Andreasen R. Chafetz H. S. *POSTER LOCATION #622*
[Silicon Isotope Analysis in Sulfur and Iron-Rich Samples by MC-ICP-MS](#) [#2869]

A new sample preparation and analytical methods in Si isotope measurements is proposed to address the potential issues with S and Fe-rich samples.

Hu J. Dauphas N. *POSTER LOCATION #623*
[Double-Spike Data Reduction in the Presence of Isotopic Anomalies](#) [#1282]

This work corrects the double-spike data reduction for isotopic anomalies and is especially helpful for people who are interested in cosmochemical origins.

Isa J. Kohl I. E. Wasson J. T. Young E. D. McKeegan K. D. *POSTER LOCATION #624*
[Quantification of Oxygen Isotope SIMS Matrix Effects in Olivine Samples: Correlation with Sputter Rate](#) [#3004]

We found that O-isotope SIMS matrix effects in olivine samples are correlated with their sputter rate.

Mercer C. M. Hodges K. V. *POSTER LOCATION #625*
[ArAR — A Software Tool to Promote the Robust Comparison of K-Ar and ⁴⁰Ar/³⁹Ar Dates Published with Different Decay, Isotopic, and Monitor-Age Parameters](#) [#2302]

We have created a software tool to aid in the comparison of K-Ar and ⁴⁰Ar/³⁹Ar dates published with different decay, isotopic, and monitor-age parameters.

Lepore K. H. Giguere S. Boucher T. Byrne S. Fassett C. I. et al. *POSTER LOCATION #626*
[Univariate vs. Multivariate Models for Predictions of Major and Trace Elements from LIBS Spectra With and Without Masking](#) [#2191]

Wavelength masks are applied to univariate and multivariate models in order to improve the accuracy of predictions of elemental concentrations using LIBS spectra.

Groopman E. E. Fahey A. J. Grabowski K. S. Fazel K. C. *POSTER LOCATION #627*
[First U-Th-Pb Measurements with the New NRL SIMS-SSAMS](#) [#2031]

U-Th-Pb / A new instrument online / NRL SIMS-SSAMS.

Groopman E. E. Fahey A. J. Grabowski K. S. Fazel K. C. *POSTER LOCATION #628*
[The NRL SIMS-SSAMS: A Unique Instrument for Cosmo- and Geochemistry](#) [#2035]

NRL SIMS-SSAMS / Molecule isobars gone / It destroys them well.

Huyskens M. H. Yin Q.-Z. Li Q.-L. Li X.-H. Liu Y. et al. *POSTER LOCATION #629*
[In Search of New Monazite and Titanite Standard Minerals for In Situ U-Pb Geochronology](#) [#2369]

New mineral standards for U-Pb geochronology of monazite and titanite.

Jeffery C. A. Henderson B.

POSTER LOCATION #630

[*A Phenomenological Theory of the Reflectance of Particulate Media: Scattering Regimes and Lorentz Band Features*](#) [#2710]

The effects of morphology can confound the detection of minerals. We present a phenomenological theory that demarcates volume and surface scattering regimes.

Xu W. J. Li B. Wu Zh. Ch. Ling Z. Ch. Zhang J.

POSTER LOCATION #631

[*The Spatial Fractal Dimension of Craters on Lunar and Martian Surfaces*](#) [#2251]

Fractal dimension (FD) was proposed by Mandelbrot. FD can be used to describe the lunar and martian surfaces.

Caswell T. E. Peters G. H. Carey E. M.

Shiraishi L. R. Milliken R. E. et al.

POSTER LOCATION #632

[*The Mechanical Attributes Characterization \(MAC\) Instrument: Linking Rock Properties to In-Situ Drill Data*](#) [#2084]

The M2020 drill separates rock cores from the bottom of the core base; in effect, the drilling operation includes a shear strength test on the rock in question.

Davey S. C. Samson C.

POSTER LOCATION #633

[*Measuring the Bulk Density of Very Small Meteorite Fragments \(volume < 0.5 cm³\) Using 3D Laser Imaging*](#) [#1007]

We determine the lower volume limit of the laser imaging method for bulk density calculations (0.09 cm³), this is then applied to small meteorite fragments.

McMahon Z. Ahrens C. Chevrier V.

POSTER LOCATION #634

[*Development of a New Pluto Surface Simulation Chamber*](#) [#1728]

Details of the development of a chamber used to simulate the conditions found on the surface of Pluto in order to run related experiments.