POSTER PRESENTATIONS
Colonnade Room and Stratford Atrium

Planetary Geochemistry and Mineralogy

Danielson L. R., Sharp T. G., Hervig R. L.
*Partitioning of Gold in Sulfide-Silicate Melts at High Pressures: Implications for Core Formation of the Earth [#3703]*
We are investigating the effects of elevated pressures on Au partitioning in sulfide-silicate liquids of ~7 wt% S, to constrain the physical and chemical state of the accreting Earth. Results suggest moderate S greatly reduces partition coefficients.

Pearson N. J., Alard O., Griffin W. L., O'Reilly S. Y.
*Re-Os Isotopes in Sulfides in Mantle Peridotites: A Record of Melt Depletion and Metasomatism [#3316]*
Interpretation of Re-Os isotopes in mantle peridotites requires understanding of the occurrence and mobility of sulfides. In-situ Os isotope analyses of single grains provides evidence for multiple sulfide generations and realistic depletion ages.

Russell J. K., Dipple G. M., Kopylova M. G.
*A Model for Parameterization of the Thermal State of Mantle Lithosphere [#3732]*
A model is developed for a mantle geotherm that is independent of crustal properties. The model is fit to P-T data from peridotite xenoliths to constrain the heat flow and temperature at the MOHO, as well as, heat production in the mantle.

Zhang H.-X., Liu C-Q.
*Isotopic and Geochemical Study of the Ultramafic Complex and Emeishan Basalt, near Panxi Continental Rift, China [#3157]*
Geochemical data of the ultramafic complex and Emeishan basalts, near Panxi rift demonstrated that mantle beneath the west Yangtze Plate in the Lower Palaeozoic could be included EM II end-member. The Emeishan basalts probably had a mantle plume source.

Belyatsky B. V., Savva E. V., Tikhomirova M., Grosche G., Wall F.
*Age and Genesis of the Siilinjarvi Archean Carbonatite Complex in Light of Isotope Data [#3622]*
New Pb-Sr-Nd isotope data for one of the oldest carbonatite massif in the world is represented. The age estimation and initial isotope characteristics are obtained.

Ashchepkov I. V., Vladykin N. V., Gerasimov P. A., Saprykin A. I., Anoshin G. N.
*Deep-seated Magmas from Siberian Platform and Surroundings and Their Melting Sources Based on Trace Element Analyses [#3645]*
Trace element composition of the kimberlite-like, related rock basalts was used to determine approximate melting sources. It was found enriched up to 3-8 times relatively PM for kimberlite-like rocks probably due to presence of accessory concentrators: perovskites, etc.

Demidova S. I., Kononkova N. N., Ulyanov A. A.
*Ge-rich Phases in Refractory Inclusions from Carbonaceous Chondrites [#3231]*
In CV3 chondrites there are CAIs, which consist of melilitite, spinel, anorthite and Ti, Al-rich pyroxene. We have studied CAIs from two CV3 chondrites Groznaya and Sahara 98044, and found rare Ge-rich phases in several Type B CAIs.

Golding S. D., Uysal I. T., Glikson A. Y., Mory A. J., Baublys K. A., Glikson M.
*Stable Isotopic Studies and Isotopic Dating of Impact Related Alteration Minerals, Woodleigh Impact Structure, Carnarvon Basin, Western Australia [#3509]*
The Woodleigh impact structure is the third largest Phanerozoic impact structure after Morokweng and Chicxulub. K-Ar dating of impact-related clay minerals indicates a Late Devonian age. Stable isotope data are suggestive of a carbonaceous chondritic component.
Gaddis S. J.  Angerman C. E.  Widom E.  Hughes J.

*Origin of the Serpent Mound Cryptoexplosion Structure, South-Central Ohio: XRD and Re-Os Isotope Evidence [#3737]*

Exploring the origin of the Serpent Mound cryptoexplosion structure in south-central Ohio through powder XRD, single crystal XRD and Re-Os isotopic analyses. XRD data support an impact origin while Os isotopes do not reflect a meteorite signature.

Brinckerhoff W. B.  Cornish T. J.  Cheng A. F.  McCoy T. J.  Vicenzi E. P.

*Direct Sampling TOF-MS for In Situ Analysis of Planets and Small Bodies [#3833]*

We describe the development of miniature time-of-flight mass spectrometers (TOF-MS) for in situ composition studies, to support landed missions to planets and small bodies.

Tuross N.

*Immunological Approaches to Finding Extant and Remnant Life [#3836]*

Extraterrestrial life detection schema will grow to involve molecular based approaches that are both DNA and protein based. Immunology allows the simultaneous investigation of both extant and remnant life.

Kochemasov G. G.

*High Chlorine Content in Martian Rocks and Soils as an Indication of Acid Highland Lithologies [#3070]*

High chlorine content in martian rocks and soils speaks in favor of acid and alkaline (less dense than andesites) highland lithologies. On Earth these rocks are enriched in Cl. Host minerals could be sodalite and halite. Gravity map of Mars favors light highlands.


*Melt Inclusions in Nakhla as Monitors of Parental Melts on Mars [#3672]*

Melt inclusions contained in phenocrysts of an igneous rock represent samples of the melt from which the mineral precipitated and can provide information concerning formation. We examine melt inclusions in Nakhla to better understand the petrogenesis of this Martian sample.