

Thursday, March 22, 2018

[R604]

**POSTER SESSION II: DIFFERENTIATED METEORITES IV:
PLANETARY DIFFERENTIATION, IRONS, AND PALLASITES
6:00 p.m. Town Center Exhibit Area**

Nimmo F. Neufeld J. A. Bryson J. F. J. **POSTER LOCATION #62**
[*Metallic Asteroid Dynamos Driven by Crustal Delamination*](#) [#1362]

Metallic asteroid cores solidifying from the top down may suffer delamination from the base of the solid crust, driving a dynamo consistent with measurements.

Righter K. Pando K. Yang S. Humayun M. **POSTER LOCATION #63**
[*Effect of Silicon on the Activity Coefficient of Rhenium in Fe-Si Liquids: Implications for HSE and Os Isotopes in Planetary Mantles*](#) [#2484]

Rhenium is a highly siderophile element, but when Si is alloyed with Fe, Re becomes moderately siderophile; the late veneer should be nervous.

Seegers A. X. Steenstra E. S. Berndt J. Klemme S. Matveev S. et al. **POSTER LOCATION #64**
[*Experimental Quantification of the Sulfide-Silicate Partitioning Behavior of Se and Te and Implications for the Se/Te Systematics of Planetary Bodies*](#) [#1595]

Presence of S increases siderophile behavior of Se and Te. S-rich planetary bodies might have increased partitioning of Se and Te into their cores.

Abrahams J. N. H. Nimmo F. Kleine T. **POSTER LOCATION #65**
[*Thermal Models of Iron Meteorite Evolution and Comparison with Pd-Ag Volatile-Loss Constraints*](#) [#1711]

We model the thermal history of an exposed core to reconcile cooling rate data with isotopic constraints on mantle stripping and subsequent [core] quenching.

Maurel C. Bryson J. F. J. Weiss B. P. Scholl A. **POSTER LOCATION #66**
[*Paleomagnetic Evidence for a Layered Partially Differentiated Iron-Meteorite Parent Body*](#) [#1171]

We present paleomagnetic evidence that the IIE iron parent planetesimal formed a metallic core, supporting the idea that this body was partially differentiated.

Lindoo A. Duncan M. S. Fei Y. **POSTER LOCATION #67**
[*Percolation Behavior in the Fe-Ni-Si-S-C System and Influence on Meteorite Compositions*](#) [#2320]

Sulfide melt parts ways / From idle metal alloy / Core compositions.

Watson H. C. Zhang Z. Linarelli J. Wang S. Cherniak D. J. **POSTER LOCATION #68**
[*Lead Diffusion and Closure Temperature in FeS: Implications for Dating Iron Meteorites*](#) [#2152]

We conducted experiments to determine the diffusion behavior of Pb in FeS. These results can be used to calculate closure temperatures in iron meteorites.

Fish B. T. Humayun M. **POSTER LOCATION #69**
[*Fractional Crystallization of IIAB Iron Meteorites*](#) [#2918]

IIAB iron meteorites formed by low pressure fractional crystallization in the cores of asteroidal and protoplanetary bodies.

Tornabene H. Ash R. D. Hilton C. D. Walker R. J. **POSTER LOCATION #70**
[*New Insights to the Formation and Crystallization History of Group IIC Iron Meteorites*](#) [#1425]

Group IIC iron meteorites are characterized by broadly chondritic relative abundances of siderophile elements indicating a parent body with minimal volatile depletion.

Utas J. A. Wasson J. T. **POSTER LOCATION #71**
[*The Crystallization and Cooling of Cape York, Revisited*](#) [#2956]

High-precision INAA data, paired with experimental diffusion data, can help to constrain the crystallization history of the IIIAB/Cape York parent body.

Hilton C. D. Birmingham K. R. Ash R. D. Walker R. J. McCoy T. J. **POSTER LOCATION #72**
[*Genetics, Age, and Crystallization Sequence of the South Byron Trio and the Potential Relation to the Milton Pallasite*](#) [#1186]

The Os, Mo, Ru, and W isotopic compositions of the South Byron Trio and the Milton pallasite are investigated, as well as models to explain their chemistry.

Habib N. DellaGiustina D. N. Laretta D. S. **POSTER LOCATION #73**
[*Modeling the Size of Pallasite Parent Bodies Using Constraints from the Fukang Pallasite*](#) [#1267]

This work develops a model to estimate the upper size limit of pallasite parent bodies and applies the model to estimate Fukang's parent body size.

Boesenberg J. S. Humayun M. Windmill R. Greenwood R. C. Franchi I. A. **POSTER LOCATION #74**
[*Sericho: A New Main Group Pallasite with Two Types of Chromite*](#) [#1556]

Sericho, a new pallasite, is characterized and compared to other MG pallasites. It contains two kinds of chromite, one of which is reversely-zoned.