

## PRINT-ONLY PRESENTATIONS

## Meteorites

Alexeev V. A.

*Depth Dependence of  $^{22}\text{Ne}/^{21}\text{Ne}$  in Ordinary Chondrites and Ablation of Meteorites* [#1003]

Statistical analysis of cosmogenic neon isotopic ratios in ordinary chondrites allows us to derive some regularities for estimating ablation degree of the chondrites.

Brandstätter F. Nazarov M. A. Kurat G.

*Barringerite from the Santa Catharina Ungrouped Iron Meteorite* [#1681]

We report on an forbidden barringerite-metal association in the Santa Catharina iron meteorite. From our investigation we conclude that barringerite but not schreibersite can stably co-exist with metal in Ni-rich ataxites at low temperatures.

Dyar M. D.

*Mössbauer Spectroscopy of Mineral Separates from SNC Meteorites* [#1701]

Mössbauer spectroscopy has been used to analyze mineral separates from 10 different SNC meteorites.  $\text{Fe}^{3+}$  contents are consistent with the few previous Mossbauer studies of separates and bulk samples, and they agree with micro-XANES results within error bars.

Fisenko A. B. Verchovsky A. B. Semjonova L. F. Wright I. P. Pillinger C. T.

*Is Xe-HL a Real Component?* [#1744]

Analysis of noble gases in the grain-size fractions of Boriskino meteorite indicate that Xe-HL is a real component implanted into diamonds after mixing of isotopically anomalous and normal components.

Greshake A. Clayton R. N. Mayeda T. K. Kurz M.

*NWA 1465 and NWA 1665: Two Unusual Carbonaceous Chondrites from Northwest Africa* [#1560]

NWA 1465 and NWA 1665 are two new unusual carbonaceous chondrites from Northwest Africa. NWA 1465 contains mm-sized flattened chondrules and CAIs as well as centimeter-sized dark objects. NWA 1665 is similar to Dar al Gani 055 and CK chondrites.

Hohenberg C. M. Pravdivtseva O. V. Meshik A. P.

*I-Xe Ages and Trapped Xe Compositions* [#2107]

Iodine trapped at identical sites as Xe can produce trapped pseudo-components with enhanced  $^{128}\text{Xe}$ . To produce the results observed in dark inclusions, little  $^{129}\text{I}$  must be present (dead iodine). If true, these observations have implications for the duration of aqueous alteration and phase Q.

Hörz F. Cintala M. J. See T. H.

*Impact Melting of Ordinary Chondrite Regoliths and the Production of Fine-grained  $\text{Fe}^0$*  [#1680]

This work investigates the possible formation of fine-grained Fe-particles on the surfaces of ordinary chondrites, parent body S-type asteroids in an effort to understand the optical properties of such bodies.

Johnson J. R.

*Visible/Near-Infrared Spectra of Experimentally Shocked Plagioclase Feldspars* [#1491]

Visible/NIR reflectance of shocked feldspars show weakening of water- and OH-related bands and non-linear reflectance changes with increasing pressure that are consistent with variations in the relative abundance of diaplectic glass.

Kashkarov L. L. Ivliev A. I. Kalinina G. V. Lavrentjeva Z. A. Lyul A. Yu. Kuyunko N. S.

*Pre-Accretion and/or Regolith History of the Pesyanoe Obrite Matter* [#1025]

Report here data on the Pesyanoe achondrite are the result of the next step in a series of work to be used as a basis for investigation of radiation and shock-thermal characteristics in a meteorite matter by complex track, thermoluminescence, chemical and petrology methods.

Lavrentjeva Z. A. Lyul A. Yu.

*REE and Some Other Trace Element Distributions of Mineral Constituents in Enstatite Meteorites* [#1026]

REE and some other trace element distributions of mineral constituents in enstatite meteorites of Adhi Kot, Pillistfer, Norton County and Pesyanoe are presented.

Miyamoto M. Ueda Y. Mikouchi T. Monkawa A.

*Reflectance Spectra for Olivine Heated with Sudden Oxygen-Fugacity Change* [#1563]

We report spectral changes for olivine heated at high temperature (up to 1300°C) with rapid oxygen-fugacity changes, and suggested that the elementary process of space weathering is related to heating with oxygen-fugacity change.

Nikitushkina O. N. Ivanov L. I. Baikov A. A.

*Formation of Unipolar Arcs Under Meteorite Action* [#1910]

One of the problems on development of advanced long terms functioning space vehicles and orbital stations is protection of constructions and individual elements against influence of meteorite flows and various particles of artificial origin, so-called space dust.

Papike J. J. Karner J. M. Shearer C. K.

*Determination of Planetary Basalt Parentage: A Simple Technique Using the Electron Microprobe* [#1018]

A simple technique to determine the planetary parentage of basaltic meteorites by comparing the Fe/Mn (atomic) of olivine and/or pyroxene vs. An% of plagioclase.

Petaev M. I. Jacobsen S. B.

*Measurement of PGEs, Re, Mo, W and Au in Meteoritic Fe-Ni Metal* [#1732]

The Harvard LA-ICP-MS system has been used to analyze 16 iron meteorites and the Divnoe primitive achondrite for Ni, Mo, Ru, Rh, Pd, W, Re, Os, Ir, Pt, and Au. The results are reported.

Sahijpal S. Soni P.

*Contributions of Short-lived Nuclides by Wolf-Rayet Stars and Supernovae 1b/c to the Early Solar System* [#1087]

Role of Wolf-Rayet stars and SNe1b/c in producing the short-lived nuclides found in early solar system is accessed by imposing isotopic constraints on the models.

Singletary S. J. Grove T. L.

*NWA 1586: Macromelting in a Monomict Ureilite* [#1191]

NWA 1586 is a unique new ureilite recovered in 2001 and displays the typical monomict ureilite texture. Pigeonite grains in this ureilite contain domains that consist of three pyroxenes, metal, a silica rich phase and voids. We interpret these to represent a macromelting event.

Slater V. P. Thompson C. K. Nettles J. Milam K. Stockstill K. R. Cahill J. Anand M. Taylor L. A.

*An Evaluation of the Igneous Crystallization Programs — MELTS, MAGPOX, and COMAGMAT Part II: Importance of Magmatic  $fO_2$*  [#1896]

This is Part II of a study to evaluate three crystallization models (MELTS, MAGPOX, and COMAGMAT) using three rock compositions at three  $fO_2$ s. Care should be taken when choosing a model as no single model is best suited for every composition or  $fO_2$ .

Stakheev Yu. I.

*Regularities of the “Mercury Breath” of the Earth* [#1045]

The Fourier analysis of 19040 hourly measurements of the mercury vapor flow “earth crust – atmosphere” were performed. Six distinct lines in power spectra were found. The frequencies of these lines coincide with frequencies of the Earth tides deformations.

Valter A. A. Plotnikova L. F.

*Biostratigraphic Indications of End Cretaceous Age of the Boltysk Impact Crater (Ukrainian Shield) [#1048]*

The complexes of foraminifera in ejecta breccia fragments and in ejecta covering sediments were determined. According to these data the time interval of crater formation is detected to be 66.8–65 Ma.

Verish R. S.

*Dale Dry Lake — New Classification, Revised Recovery Information [#1801]*

This paper reports on a recent characterization of the Dale Dry Lake meteorite. This stone is now classified by UCLA as an unequilibrated (L3.7) chondrite. This paper proposes that these revisions to the Catalogue of Meteorites be posted in the Meteoritical Bulletin.

Vogel N. Wieler R. Baur H. Bischoff A.

*Noble Gases in Allende Fluffy and Compact CAIs [#1873]*

Ne and Ar in Allende CAIs are explained by cosmogenically produced Ne and Ar taking into account the CAI-chemistry and large preatmospheric size of Allende causing cosmogenic production of  $^{36}\text{Ar}$  from Cl. No trapped noble gas components were detected.

Xie Z. Sharp T. G. DeCarli P.

*Estimating Shock Pressures from High-Pressure Minerals in Shock-induced Melt Veins of the Chondrites [#1280]*

High-pressure phases in shock-induced melt veins of seven L chondrites were investigated by TEM, and used to constrain crystallization pressures of melt veins based on phase diagram, then to infer shock pressures. The study indicates the shock pressures  $\sim 25$  GPa for seven samples (S3–S6).

Xiong Y.-L. Hewins R. H.

*Evaporation Loss of Light Elements as a Function of Cooling Rate: Logarithmic Law [#1206]*

This paper proposes that evaporation loss of light elements as a function of cooling rate at constant peak temperature and oxygen fugacity should obey the logarithmic law.

Zinovieva N. G. Mitreikina O. B. Granovsky L. B.

*Systematic Compositional Variations of Silicates and Metallic Phases as Evidence of Liquid Immiscibility in Chondritic Melts [#1058]*

Systematic variations in the composition of silicates and metallic phases in ordinary chondrites of different petrological types as well as in the results of experimental melting of chondrites provide evidence of their magmatic genesis.