Tuesday, August 9, 2016
SPECIAL SESSION: FROM METEORITES TO PLANETS –
A SESSION IN HONOR OF HEINRICH WÄNKE I
8:30 a.m. Room C

Chairs: Ana-Catalina Plesa
Katharina Lodders

8:30 a.m. Luu T.-H. * Hin R. C. Coath C. D. Elliott T.
High Precision Mg-Isotope Measurements of Bulk Chondrites and the Homogeneity of $^{26}$Al in the Solar Nebula [#6485]
We have re-examined the debated issue regarding the origin of the variability in the mass-independent $^{26}$Mg compositions between bulk solar system reservoirs by making a new set of high precision Mg isotopic measurements on a suite of bulk chondrites.

8:45 a.m. Krabbe N. * Kruijer T. S. Kleine T.
Assessing the Extent of Mass-Dependent Tungsten Isotope Variations in Solar System Materials [#6419]
$\delta^{184/183}$W of chondrites, irons, and terrestrial samples are uniform, suggesting that W stable isotope variations induced in high-temperature processes are small. Achondrites show variable signatures, potentially induced by post-core formation events.

9:00 a.m. Burkhardt C. * Borg L. E. Brennecka G. A. Shollenberger Q. R. Dauphas N. Kleine T.
Nucleosynthetic Nd Isotope Anomalies in Meteoritic Materials: Implications for $^{146}$Sm-$^{142}$Nd Systematics and the Relation of Chondrites and Earth [#6263]
High-precision Nd isotope data remove the evidence for an early global silicate differentiation of the Earth, obviate the need for ‘hidden reservoir’ and ‘non-chondritic’ Earth models, and imply a chondritic Sm/Nd ratio for the bulk Earth.

9:15 a.m. Jones R. H. * Brearley A. J. Lewis J. A.
Bulk Fluorine and Chlorine Contents of Chondritic Meteorites [#6413]
Bulk F contents of individual chondrite groups are poorly defined. We reappraise bulk Cl and F contents of OCs, based on modal abundance and compositions of apatite, and propose much lower bulk F abundances for OCs and ECs than commonly used values.

9:30 a.m. Ebel D. S. * Stewart S. T.
The Origin of Mercury: Chaotic, Orderly, or Both? [#6538]
We address whether Mercury’s anomalous density, chemistry, and albedo could result from giant impacts or from gradual dynamical and chemical processes in the innermost disk, in the context of the meteorite record.

9:45 a.m. McCubbin F. M. * McCoy T. J.
Expected Geochemical and Mineralogical Properties of Meteorites from Mercury: Inferences from MESSENGER Data [#6242]
We use data returned from the MESSENGER spacecraft to provide new insights into the mineralogical and geochemical properties that would be exhibited by any potential meteorite from Mercury.