Thursday, March 15, 2007
POSTER SESSION II: GENESIS
6:30 p.m. Fitness Center

Burnett D. S. Woolum D. S. Jurewicz A. J. G. McKeegan K. D. Guan Y.
Solar Wind Elemental Abundances from GENESIS Collectors **[#1843]**
GENESIS bulk solar wind analyses were made by SIMS on Si, Sandia diamond-like-C, and epitaxial Si on sapphire (SoS). Preliminary Fe, Mg, Ca, Cr and Na fluences are calculated. The eventual goal is to test for fractionation (or lack thereof) of solar-wind elements with FIPs <9eV.

Pellin M. J. King B. V. Veryovkin I. V. Tripa C. E. Savina M. R. Burnett D. S.
The Depth Profile of Solar Wind Magnesium in Si and Diamond-like Carbon Collectors Returned by Genesis **[#2181]**
The samples returned to Earth by the Genesis Discovery Mission contain a record of the elemental and isotopic abundances of the solar wind. Because depth is the key parameter for isolating solar wind atoms from terrestrial contamination, it is important to understand the solar wind implant profiles.

Veryovkin I. V. Tripa C. E. Pellin M. J. Savina M. R. Burnett D. S.
The Elemental Abundance of Magnesium in Solar Wind Samples (Silicon and Diamond-like Carbon) Returned by Genesis **[#2224]**
The elemental abundance of Mg in the solar wind is measured using two separate Genesis flight samples.

Lyon I. Henkel T. Jurewicz A. J. G. Burnett D.
TOFSIMS Studies of Genesis Standards and Samples **[#1673]**
TOFSIMS analysis of Genesis samples and standards is described. The techniques are complementary to existing SIMS techniques.

Kitts K. Sutton S. Newville M.
Abundance and Charge State of Implanted Solar Wind Transition Metals in Individual Apollo 16 and 17 Lunar Soil Plagioclase Grains Determined In Situ Using Synchrotron X-Ray Fluorescence **[#1106]**
We report (1) a new method for determining the relative abundances *in situ* of Cr, Mn, Fe and Ni in implanted solar wind in individual Apollo 16 and 17 lunar plagioclases via synchrotron X-ray fluorescence and (2) the charge states of these metals.

Heber V. S. Wiens R. C. Reisenfeld D. B. Allton J. H. Baur H. Burnett D. S. Olinger C. T. Wiechert U. Wieler R.
The Genesis Solar Wind Concentrator Target: Mass Fractionation Characterised by Ne Isotopes **[#1917]**
The concentrator caused fractionation of the implanted solar wind ions as function of the radial position at the concentrator target. This fractionation was measured using Ne and compared with simulations. Data will be important for eventual O isotope analyses on the concentrator targets.

Verchovsky A. B. Sestak S. Franchi I. A.
Towards the Isotopic Measurement of Solar Wind Carbon in the Genesis Silicon Target **[#2061]**
We report a current stage of the carbon isotope measurements in the Genesis Si target.

Calaway M. J. Rodriguez M. C. Stansbery E. K.
Genesis Silicon Carbide Concentrator Target 60003 Preliminary Ellipsometry Mapping Results **[#1632]**
Spectroscopic ellipsometry results and images are used to assess the amount of surface contamination on Genesis silicon carbide concentrator target 60003. Ellipsometry data show possible material substrate alteration by solar wind radiation.

Calaway M. J. Burnett D. S. Rodriguez M. C. Sestak S. Allton J. H. Stansbery E. K.
Decontamination of Genesis Array Materials by UV Ozone Cleaning **[#1627]**
XPS and spectroscopic ellipsometry are used to evaluate the effectiveness of UV ozone cleaning for removing a carbon based surface contaminate on silicon and sapphire semiconductor materials from NASA's Genesis solar wind sample return mission.

Kuhlman K. R. Burnett D. S.
Extraction Replica Cleaning of Genesis AuOS and AlOS **[#1920]**
Extraction replicas using cellulose acetate films are being investigated for the cleaning of delicate samples such as gold on sapphire (AuOS) and aluminum on sapphire (AlOS).

Allton J. H. Wentworth S. J. Rodriguez M. C. Calaway M. J.
Cleaning Genesis Solar Wind Collectors with Ultrapure Water: Residual Contaminant Particle Analysis **[#2138]**
Cleaning of Genesis solar wind array collector fragments using ultrapure water removes most particles >5 μm and some particles >0.5 μm. Composition of remaining particles is primarily crushed collector material, not Utah or spacecraft component material.