Tuesday, March 20, 2012
POSTER SESSION I: EARLY SOLAR SYSTEM CHRONOLOGY
6:00 p.m. Town Center Exhibit Area

Marhas K. K. Randhawa J. S.
Production of Short Lived Radionuclides: Late-Stage Irradiation in the Early Solar System **[#2410]**
Production of short-lived radionuclides, ^{26}Al, ^{36}Cl, and ^{10}Be in late irradiation scenario at asteroidal distances with target material of sodalite composition.

Meyer B. S. Yu T.
Dynamical Weak Statistical Equilibrium and the Neutron-Rich Iron-Group Isotopes **[#2727]**
Calcium-48 has substantial production in expansions of low-entropy matter, which probably occurs in dense thermonuclear supernovae. We explore the weak statistical equilibrium in such environments to constrain their neutron richness.

Yu T. Meyer B. S.
On Production of Neutron-Rich Iron-Group Isotopes in Simple Models of Dense Thermonuclear Supernovae **[#2293]**
We presented a simple thermonuclear (Type Ia) supernovae model that shows for high initial density (low entropy) most of the yield would be neutron-rich iron-group isotopes. This may help to explain the excesses and deficits correlation in FUN CAIs.

Bowers M. Collon P. Kashiv Y. Lu W.
^{33}S(α,p)^{36}Cl Cross Section Measurement for Production in the Early Solar System **[#1700]**
The ^{33}S(α,p) ^{36}Cl reaction is one of the most important for the creation of ^{36}Cl in the early solar system. We measured the averaged reaction cross section in the energy range 1.84–2.04 MeV/A.

Bricker G. E. Jr. Caffee M. W.
Incorporation of ^{7}Be, ^{10}Be, ^{14}C, ^{26}Al, ^{36}Cl, ^{41}Ca, and ^{53}Mn into Early Solar System Materials in the Solar Wind Implantation Model **[#1599]**
We consider the short-lived radionuclides ^{7}Be, ^{10}Be, ^{14}C, ^{26}Al, ^{36}Cl, ^{41}Ca, and ^{53}Mn in calcium-aluminum-inclusions (CAIs) in primitive meteorites in accordance with a solar wind implantation model.

Blinova A. Alexander C. M. O'D. Wang J. Herd C. D. K.
Mineralogy and Mn-Cr Extinct Radionuclide Dating of a Dolomite from the Pristine Tagish Lake Meteorite **[#1188]**
We present Mn-Cr data for a large carbonate grain found in pristine Tagish Lake meteorite. These data give us insights into the timing of alteration on the Tagish Lake parent body.

Englert P.
^{53}Mn and Cosmic Ray Track Production Rates: Contributions of Exposure Histories of Djermaia and Lost City **[#1729]**
A ^{53}Mn CRT relationship is presented as a useful tool for the analysis shielding depth, preatmospheric size, and exposure history of meteorites.

Jörg G. Amelin Y. Kossert K. v. Gostomski C. L.
Direct Determination of the Half-Life of ^{41}Ca **[#1757]**
The half-life of ^{41}Ca is determined at 9937 ± 146 years using double spike isotope dilution TIMS, and liquid scintillation counting using triple-to-double coincidence ratio method on a radiochemically pure, carrier-free ^{41}Ca.

Marks N. E. Borg L. E. Hutcheon I. D. Jacobsen B. Clayton R. N. Mayeda T. K.
Temporal and Spatial Heterogeneities in the Solar Nebula Reflected in Rb-Sr and Sm-Nd Systematics of Al3S4, an Allende Type B CAI **[#2259]**
We have measured the Rb-Sr, ^{174}Sm-^{143}Nd and ^{147}Sm-^{142}Nd isotope compositions of a type B CAI. These data indicate that CAIs and Earth have the same ^{142}Nd/^{144}Nd composition and that carbonaceous chondrites are distinct from both Earth and CAIs.

Ito M.
THE JAMSTEC NanoSIMS 50L Ion Microprobe: Applications to Earth, Planetary and Life Sciences **[#1752]**
The JAMSTEC NanoSIMS 50L has been installed at Kochi Institute for Core Sample Research end of 2011. We will investigate variety of samples from extraterrestrial, terrestrial, and biology samples. Some initial isotopic measurements will be presented.

Liu M.-C. Chaussidon M.
Calcium-41 Revisited: Development of Potassium Isotope Mass Spectrometry on CAMECA 1280HR2 **[#1890]**
We developed mass spectrometry on CAMECA 1280HR2 to measure the potassium-isotopic compositions of CAIs in hopes of confirming the existence and initial abundance of ^{41}Ca in the early solar system.

Kööp L. Davis D. W.
Classification and U-Pb Isotopic Study of Northwest Africa 6514 **[#2066]**
In addition to results from a U-Pb isotopic study of different components of ordinary chondrite NWA 6514 by laser ablation inductively coupled plasma mass spectrometry, we present a petrographic description and the classification of this meteorite.

Tissot F. L. H. Dauphas N.
$^{238}U/^{235}U$ Ratios of Anagrams: Angrites and Granites **[#1981]**
We report $^{238}U/^{235}U$ ratios of five angrites and give the corresponding Pb-Pb ages of D'Orbigny and Angra Dos Reis. The U-isotopic composition of terrestrial granites (I, S, and A types) is also assessed to determine the influence of the protolith.

Burnett D. S. Paque J. M. Beckett J. R. Guan Y.
On the Origin of Li Isotopic Variations in Ca-Al-Rich Inclusions (CAIs) **[#2159]**
Li isotopes in relatively unaltered CAIs show that the incorporation of Li occurred subsequent to evaporation event(s), and occurred independently of whatever process produced ^{16}O-poor melilite in most CAIs. No evidence for in situ ^{7}Be is found.

Van Orman J. A. Cherniak D. J. Kita N. T.
Magnesium Diffusion in Plagioclase **[#1467]**
We present experimental data showing that Mg diffusion increases systematically with decreasing anorthite content. Mg diffusion in An23 is two orders of magnitude faster than in pure anorthite, and the closure temperature is more than 100 K lower.

Ireland T. J. Dauphas N. Tissot F. L. H.
Development of an Automated All-Teflon HPLC System for the Analysis of Precious Geological and Extraterrestrial Materials **[#2141]**
We outline the development and progress toward building an automated all-Teflon HPLC system for the analysis of precious geological and extraterrestrial samples. Our system has several traits that distinguish it from traditional column setups.