

Monday, March 12, 2007
EARLY SOLAR SYSTEM ISOTOPES
2:30 p.m. Amphitheater

Chairs: G. J. MacPherson
F. Moynier

- 2:30 p.m. Jacobsen B. * Yin Q.-Z. Moynier F. Hutcheon I. D. Krot A. N.
Back to the Canonical $^{26}\text{Al}/^{27}\text{Al}$ Ratio in the Early Solar System: New High Precision MC-ICP-MS Analyses of the Allende CAIs [#1491]
 We report new high precision MC-ICP-MS Al-Mg isotope data on six well-characterized bulk Allende CAIs. The CAIs form a well-defined isochron that places the solar initial $^{26}\text{Al}/^{27}\text{Al}$ at the “canonical” value of $(4.90 \pm 0.28) \times 10^{-5}$.
- 2:45 p.m. MacPherson G. J. * Bullock E. S. Janney P. E. Davis A. M. Wadhwa M. Krot A. N.
High Precision Al-Mg Isotope Studies of Condensate CAIs [#1378]
 High precision *in situ* Mg-isotopic analyses of three Group II condensate CAIs give $(^{26}\text{Al}/^{27}\text{Al})_0 \sim 5 \times 10^{-5}$ for primary phases, in contrast with recent measurements yielding “supracanonical” ratios. Multiple episodes of condensation may be implied.
- 3:00 p.m. Srinivasan G * Chaussidon M Bischoff A
Al-26 and Be-10 in Efremovka and Acfer CAIs: Constraints on the Origin of Short-lived Radionuclides [#1781]
 In this abstract we present ^{26}Al and ^{10}Be abundances in Efremovka and Acfer CAIs. These measurements help us to constrain the origin of short-lived radionuclides ^{26}Al , ^{10}Be .
- 3:15 p.m. Tachibana S. * Huss G. R. Nagashima K.
 ^{60}Fe - ^{60}Ni Systems in Ferromagnesian Chondrules in Least Equilibrated Ordinary Chondrites [#1709]
 Nickel isotopic measurements were conducted for seven ferromagnesian chondrules from Semarkona (LL3.0) and Bishunpur (LL3.1). Four of seven chondrules show marginal excesses of ^{60}Ni , suggesting the presence of ^{60}Fe at the timing of their formation.
- 3:30 p.m. Cook D. L. * Clayton R. N. Wadhwa M. Janney P. E. Davis A. M.
Nickel Isotope Systematics in Troilite from Magmatic and Non-Magmatic Iron Meteorites [#2287]
 We measured the Ni isotopic compositions of troilites from 10 iron meteorites (both magmatic and non-magmatic irons). No excesses of ^{60}Ni from ^{60}Fe decay were measured. However, Ni anomalies of an unknown origin were measured in several samples.
- 3:45 p.m. Chen J. H. * Papanastassiou D. A. Wasserburg G. J.
High Precision Nickel Isotopic Analyses in Meteorites [#1753]
 We present high precision Ni isotope data on metal and sulfide from iron meteorites and chondrites and discuss the implications. We do not confirm large effects in sulfides from irons, reported earlier by others.
- 4:00 p.m. Quitté G. * Markowski A. Halliday A. N. Meier M. Latkoczy C. Günther D. Telouk Ph. Blichert-Toft J. Albarède F.
A Reassessment of the ^{60}Fe - ^{60}Ni Isotopic System as a Ubiquitous Chronometer for the Early Solar System [#1900]
 Nickel isotopes have been measured in CAIs, irons, eucrites and angrites. We show that the ^{60}Fe - ^{60}Ni system cannot be used as a reliable chronometer for all objects and that ^{60}Fe was probably heterogeneously distributed in the early solar system.

- 4:15 p.m. Yin Q.-Z. * Jacobsen B. Moynier F. Hutcheon I. D.
Toward Consistent Chronology in the Early Solar System: High Resolution ^{53}Mn - ^{53}Cr Chronometry Applied to Chondrules in Primitive Ordinary Chondrite [#1482]
High-precision ^{53}Mn - ^{53}Cr data obtained for Chainpur (LL3.4) chondrules refines the initial $^{53}\text{Mn}/^{55}\text{Mn}$ ratio to $(5.1\pm 1.6)\times 10^{-6}$. A consistent chronology with other chronometers such as ^{26}Al - ^{26}Mg and ^{207}Pb - ^{206}Pb systems emerges in the early solar system.
- 4:30 p.m. Baker R. G. A. * Schönbächler M. Rehkämper M.
New Evidence from Carbonaceous Chondrites for the Presence of Live ^{205}Pb in the Early Solar System [#1840]
New thallium isotope data from carbonaceous chondrites support the conclusion from earlier work that live ^{205}Pb was present in the early solar system and provide evidence for stable isotope fractionations that occurred on the meteorite parent bodies.