Tuesday, March 15, 2005
POSTER SESSION I: PRESOLAR GRAINS
7:00 p.m. Fitness Center

Marhas K. K. Hoppe P. Ott U.
Continued Study of Ba Isotopic Compositions of Presolar Silicon Carbide Grains from Supernovae **[#1855]**
Ba isotopic compositions in Type X SiC grain show lower than solar $^{135}Ba/^{136}Ba$ and $^{137}Ba/^{136}Ba$ and higher than solar $^{138}Ba/^{136}Ba$. This can be explained by mixing of s-processed matter with r-processed/n-burst processed matter in SN.

Savina M. R. Paul M. Ofan A. Barzyk J. G. Pellin M. J.
A Search for Live ^{244}Pu in Deep-Sea Sediments: Preliminary Results of Method Development **[#2350]**
We report on the initial stages of a search for live ^{244}Pu in deep-sea sediments. We propose to use Resonant Ionization Mass Spectrometry to improve sensitivity over existing methods.

Chen C. Taylor S. Sharma M.
Iron and Osmium Isotopes from Stony Micrometeorites and Implications for the Os Budget of the Ocean **[#2134]**
Five micrometeorites were analyzed for Os and Fe concentrations and/or isotopes. >99.5% of Os and up to 90% of Fe has been lost. We interpret this to mean that Fe and Os are being lost as nanoparticles contributing to dissolved Os in the ocean.

Zinner E. * Amari S. Jennings C. Mertz A. F. Nguyen A. N. Nittler L. R. Hoppe P.
Gallino R. Lugaro M.
Al and Ti Isotopic Ratios of Presolar SiC Grains of Type Z **[#1691]**
Al and Ti isotopic ratios were measured in type Z SiC grains. The Al ratios are in the range of those in mainstream grains and are much smaller than those in presolar oxide grains. The Ti ratios confirm the grains' origin in low-metallicity AGB stars.

Tizard J. Lyon I. C. Henkel T.
Elemental Abundance in Presolar SiC: Comparing Grains Separated by Acid Residue and Gentle Separation Procedures **[#2115]**
We present a comparison of elemental abundances, by TOFSIMS analysis, in presolar silicon carbide grains including grains separated by acid dissolution and grains separated by a new gentle separation method to look for artificial anomalies.

Yoshida T. Umeda H. Nomoto K.
Silicon Isotopic Ratios of Presolar Grains from Supernovae **[#1556]**
We investigate Si isotopic ratios of mixtures of supernova ejecta using 3.3, 4, 6, and 8 M He star models. The isotopic signature $\delta^{29}Si/^{28}Si > \delta^{30}Si/^{28}Si$ of supernova grains is better reproduced by the supernova mixtures of less massive stars.

Stephan T. Weber I. Hoppe P.
TOF-SIMS, NanoSIMS, and TEM Analysis of Interplanetary Dust Particle Sections **[#1645]**
Three IDPs were selected for TOF-SIMS, NanoSIMS, and TEM analysis. This suite of analytical techniques allows to obtain information on the elemental, isotopic, and mineralogical composition of IDPs on a sub-micrometer scale.

Floss C. Stadermann F. J.
Presolar (Circumstellar and Interstellar) Phases in Renazzo: The Effects of Parent Body Processing **[#1390]**
Although aqueous alteration probably destroyed or equilibrated most presolar silicates in matrix material from Renazzo, this meteorite contains high abundances of SiC, and has N isotopic micro-distributions that are similar to those in IDPs.

Nagashima K. Sakamoto N. Yurimoto H.
Destruction of Presolar Silicates by Aqueous Alteration Observed in Murchison CM2 Chondrite **[#1671]**
Four presolar silicates and 14 presolar carbonaceous grains were found in Murchison. The lower abundance of presolar silicates than that of presolar carbonaceous grains suggests preferential destruction of presolar silicates by aqueous alteration.

Verchovsky A. B. Fisenko A. V. Semjonova L. F. Wright I. P.
Nanometer-sized Diamonds from AGB Stars **[#2285]**
We obtained some evidence that a small fraction of presolar diamonds could come from AGB stars.

Fisenko A. V. Verchovsky A. B. Semjonova L. F. Wright I. P.
A Model for Multiple Populations of Presolar Diamonds **[#2304]**
We developed a three-population model which is able to explain variations of nitrogen concentration and isotopic composition observed during stepped combustion of presolar diamonds.