Davidson J. Nittler L. R. Alexander C. M. O’D. Stroud R. M. POSTER LOCATION #85
Presolar Materials and Nitrogen Isotope Anomalies in the Unique Carbonaceous Chondrite
Miller Range 07687 [1376]
We report high presolar grain abundances (O- and C-anomalous) in the carbonaceous chondrite MIL 07687 indicating that it is of very low petrographic type.

Liebig B. Liu M. C. POSTER LOCATION #86
A Search for Presolar Grains in the Murchison Meteorite [1631]
The recently established Cameca NanoSIMS 50L ion probe was used to search for grains of presolar origin in a slab of the Murchison meteorite.

Jacquet E. Petitat M. Mostefaoui S. Gounelle M. Birck J.-L. et al. POSTER LOCATION #87
Chromium-54 Carriers in a Tagish Lake Residue: A NanoSIMS Study [1195]
We found four grains with 54Cr excesses up to five times solar in a Tagish Lake residue. They may account for the isotopic variations of chondrites.

Liu N. Gallino R. Bisterzo S. Davis A. M. Savina M. R. et al. POSTER LOCATION #88
Zirconium Isotope Abundances in Single Mainstream SiC Grains and the 13C Pocket Structure in AGB Models [1292]
We compare previous single mainstream SiC grain data with postprocessing AGB nucleosynthesis model predictions with different 13C pockets for Zr-isotope ratios.

Fujiya W. Hoppe P. Zinner E. Pignatari M. Herwig F. POSTER LOCATION #89
A Born-Again AGB Star Origin of Type AB Silicon Carbide Grains Inferred from Radiogenic Sulfur-32 [1515]
We found presolar SiC grains of Type AB with 32S enrichments. It is likely that these grains originate from born-again AGB stars.

Jadhav M. Nagashima K. Huss G. R. POSTER LOCATION #90
A SIMS Trace Element Study of Presolar Graphite Grains from Orgueil [1015]
We present SIMS trace-element data (Mg, Si, Ca, Sc, Ti, V, Fe, Ni, Rb, Sr, Y, Zr, Nb) for low-density graphite grains from Orgueil.

Monson N. N. Morris M. R. Young E. D. POSTER LOCATION #91
New Measurements of Silicon Isotope Ratios Across the Galaxy with Implications for Galactic Chemical Evolution [2689]
Reporting on the first new radio astronomy measurements of silicon isotope ratios across the galaxy in nearly 30 years.

Yu T. Meyer B. S. Fedkin A. V. Grossman L. POSTER LOCATION #92
Condensation in Ejecta from Dense Thermonuclear Supernovae [2247]
When dense, neutron-rich layers of Type Ia supernovae mix with unburned oxygen, they can condense perovskite, a possible carrier of 48Ca and 50Ti.

Ishizuka S. Kimura Y. Sakon I. POSTER LOCATION #93
Evolving the 10 μm Band of Silicates Nanoparticles During Homogeneous Nucleation and Subsequent Growth [1598]
We developed a new IR technique directly comparable to astronomical observations and investigated spectra of as-grown free-flying cosmic dust analogues.
Atom-probe tomography is an analytical method that has considerable potential in cosmochemistry. We summarize results from nanodiamonds and presolar SiC.

We have been designing and building CHILI at the University of Chicago, which is poised to perform well beyond the capabilities of previous RIMS instruments.

A microcalorimeter is being developed to measure trace elements in cometary and interstellar particles returned by Stardust.

We designed a calibration protocol for D/H ratios by NanoSIMS with polyatomic ions. We then applied it to analyze an ultracarbonaceous Antarctic micrometeorite.

High abundances of heterogeneously distributed organic material from the production process in the aerogel tiles hamper detection of cometary organic material.

A Raman spectroscopic study of four cometary tracks from the Stardust collector has revealed the presence of >36 subgrains (diameter ~1 µm) of varying composition.

Distinctive morphological, textural, and microstructural 3-D features are noninvasively uncovered on the nanoscale in a likely thermally altered IDP.
POSTER LOCATION #105

Origins and Distribution of Chondritic Olivine Inferred from Wild 2 and Chondrite Matrix [#2643]

Wild 2 and matrix olivine compositions reveal the diverse origins of KBO material: AOAs, rare relict grains, KBO processes, and chondrules from various regions.

POSTER LOCATION #106

Xenon in Antarctic Micrometeorites (AMMs) and Interplanetary Dust Particles (IDPs) [#2923]

I will present Xe abundance and isotopic compositions from very small IDP and AMM samples.

POSTER LOCATION #107

Reproducibility of Ion Probe Oxygen Isotope Measurements in Stardust Cometary Samples [#2651]

We remeasured the O-isotopic composition of Stardust grains using the UH Cameca ims 1280 ion probe to investigate the contribution of systematic uncertainties.

POSTER LOCATION #108

Survival and Condition of Micron-Scale Refractory Grains in Stardust-Analog Al Foil Craters [#1508]

FIB-TEM studies of refractory Stardust analogs show that surviving crystalline material is better preserved in 1-µm-sized, single-grain impact Al foil craters.

POSTER LOCATION #109

Impacts on the Hubble Space Telescope Wide Field and Planetary Camera 2: Microanalysis and Recognition of Micrometeoroid Compositions [#1733]

Micrometeoroid remnants can be identified by X-ray analysis of hypervelocity impact residues on an Al alloy plate coated by complex zinc orthotitanate paint.

POSTER LOCATION #110

Micrometeoroid Impacts on the Hubble Space Telescope Wide Field and Planetary Camera 2: Ion Beam Analysis of Subtle Impactor Traces [#1727]

Ion beam (Particle Induced X-ray Emission, or PIXE) analysis shows subtle micrometeoroid impactor compositions on samples returned from the Hubble Space Telescope.

POSTER LOCATION #111

Micrometeoroid Impacts on the Hubble Space Telescope Wide Field and Planetary Camera 2: Smaller Particle Impacts [#1514]

Small impacts on the HST-WFPC2 have been characterized using SEM, EDS, and PIXE analysis. The type of impactor was determined, when possible, using these data.

POSTER LOCATION #112

Micrometeoroid Impacts on the Hubble Space Telescope Wide Field and Planetary Camera 2: Larger Particles [#1722]

Millimeter-scale impact features on the radiator of Wide Field and Planetary Camera 2 of the Hubble Space Telescope reveal diverse micrometeoroid compositions.

POSTER LOCATION #113

Impacts on the Hubble Space Telescope Wide Field and Planetary Camera 2: Experimental Simulation of Micrometeoroid Capture [#1466]

Hypervelocity experiments using mineral powders validate analytical methods for recognition of micrometeoroid impacts on painted alloy surfaces in Earth orbit.
POSTER LOCATION #114

Upper Jurassic Micrometeorites from Cañadon Asfalto Fm., Patagonia, Argentina [#2482]

The aim of this abstract is to present morphological and textural data of melted micrometeorites from sediments of the upper Jurassic Cañadon Asfalto basin.

POSTER LOCATION #115

Initial Results from the Kwajalein Micrometeorite Collections [#1823]

Here we describe the Kwajalein micrometeorite collection, the preparation method required for their analysis, and report on the initial results.