Lever J. H. Habermehl M. Fiotitakis A. Taylor S.  
Collecting Time-sequenced Records of Micrometeorites from Polar Ice Caps [\#1105]  
Our goal is to design, build and calibrate a collector that can obtain time-sequenced records of micrometeorites and terrestrial dust during hot-water drilling operations into polar ice caps.

Duprat J. Engrand C. Maurette M. Gounelle M. Kurat G. Leroux H.  
Friable Micrometeorites from Central Antarctica Snow [\#1678]  
We recovered micrometeorites trapped in central Antarctica surface snow. The CONCORDIA-Collection is characterized by minimal terrestrial weathering and friable fine-grained micrometeorites. Size distributions are reported.

Gattacceca J. Rochette P. Folco L. Perchiazzi N.  
A New Micrometeorite Collection from Antarctica and Its Preliminary Characterization by Microobservation, Microanalysis and Magnetic Methods [\#1315]  
Thousands of micrometeorites were collected in aeolian deposits in Antarctica during the XIX PNRA expedition. Such large and well preserved population offers a good opportunity to test and develop a magnetic classification procedure, in parallel to mineralogical and geochemical characterization.

Nitrogen Isotopic Anamolies in a Hydrous Interplanetary Dust Particle [\#1003]  
The discovery of an $^{15}$N-enrichment in a serpentine-rich IDP is reported. This isotopic anomaly within an amorphous carbon grain may be inherited from the cold molecular cloud.

Matrajt G. Brownlee D. E. Joswiak D. J. Taylor S.  
Atmospheric Entry Heating Effects on Organic Carbonaceous Phases of IDPs and Polar Micrometeorites: An EELS Study [\#1553]  
Energy Electron Loss Spectroscopy (EELS) was combined to high resolution imaging to differentiate the thermally processed carbon from the pristine carbon in IDPs and micrometeorites.

Quirico E. Rouzaud J.-N. Bonal L. Montagnac G.  
Maturation Grade of Coal Samples as Revealed by Raman Spectroscopy [\#1657]  
Raman spectroscopy is a useful tool for studying organic matter in cometary grains and pristine chondrites. This study focused on the definition of optimized experimental parameters, and revealed sample photoinstability under laser irradiation.

Reedy R. C.  
Recent Solar-Proton Fluxes [\#2184]  
The event-integrated fluences of solar protons up to 2004 have been determined and compared to previous data. The current solar cycle has been very active, and very large fluxes of solar protons have affected spacecraft and meteories.

Amorphization of Forsterite Grains Due to High Energy Heavy Ion Irradiation – Implications for Grain Processing in ISM [\#2342]  
The absence of crystalline silicates in diffuse ISM is intriguing and not well understood. Our irradiation experiments on forsterite single crystals support the hypothesis that high energy heavy cosmic rays can efficiently amorphize silicate grains in the ISM.
Ipatov S. I. Kutyrev A. S. Madsen G. J. Mather J. C. Moseley S. H. Reynolds R. J.

Dynamical Zodiacal Cloud Models Constrained by High Resolution Spectroscopy of the Zodiacal Light [1266]

Using dynamical models of the zodiacal cloud, we investigated how the solar spectrum is changed by scattering by dust particles and compared the results with the observations.

Marov M. Ya. Ipatov S. I.

Migration of Dust Particles and Volatiles Delivery to the Inner Planets [1268]

Model of collision probabilities of dust debris with Earth and Venus was developed. Dust particles could be most efficient in the organic matter inventory surviving atmospheric entry, rather than significantly contribute to the accretion of the inner planets.

Morlok A. Menzies O. N. Koehler M. Bland P. A. Cressey G. Grady M. M.

Mid-Infrared Spectroscopy of CAI and AOA from the Allende CV3,2 Chondrite [1644]

Mid-infrared spectra of bulk CAI from the CV3.2 chondrite Allende are presented and compared with astronomical spectra of cometary dust, zodiacal light, the circumstellar disk of beta Pictoris and dust around the red supergiant PR Per.

Morlok A. Koehler M. Grady M. M.

Infrared Spectroscopy of Extraterrestrial Material: Comparison with Astronomical Spectra of Dust [1646]

Infrared spectra of components (CAI, matrix etc.) from type 3 carbonaceous chondrites (Allende, Ornans, Vigarano) are compared with infrared spectra from astronomical objects (comets, zodiacal light, circumstellar disks and others).