

Monday, March 13, 2006
STARDUST: MISSION ACCOMPLISHED
8:30 a.m. Crystal Ballroom A

Chairs: D. E. Brownlee
P. Tsou

- 8:30 a.m. Brownlee D. E. * Flynn G. Hörz F. Keller L. McKeegan K. Sandford S. Tsou P. Zolensky M. E.
Comet Samples Returned by the Stardust Mission [#2286]
 Stardust has returned samples from comet Wild 2. The particles captured from the coma of a Kuiper belt comet should provide an intimate view of the initial solid building materials of the solar system that existed beyond the orbit of Neptune.
- 8:45 a.m. Tsou P. * Brownlee D. E. Flynn G. J. Hörz F. Keller L. McKeegan K.
 Sandford S. A. Zolensky M. E.
STARDUST's Comet Wild 2 and Contemporary Interstellar Stream Sample Status [#2189]
 STARDUST's Wild 2 and interstellar samples returns to Earth. The preliminary number of samples, condition of the samples and their tracks will be presented.
- 9:00 a.m. Flynn G. J. * Borg J. Bleuet P. Brenker F. Brennan S. Daghlian C. Djouadi Z. Ferroir T.
 Gallien J.-P. Gillet Ph. Grant P. G. Grossemy F. Herzog G. F. Ishii H. A. Khodja H. Lanzirotti A.
 Leitner J. Lemelle L. Luening K. MacPherson G. Marcus M. Matrajt G. Nakamura T. Nakano T.
 Newville M. Pianetta P. Rao W. Rost D. Sheffield-Parker J. Simionovici A. Stephan T.
 Sutton S. R. Taylor S. Tsuchiyama A. Uesugi K. Westphal A. Vicenzi E. Vincze L.
Chemical Analysis of Wild-2 Samples Returned by Stardust [#1217]
 The Stardust Composition Preliminary Analysis Team will report on preparations for the chemical analysis of the samples of comet Wild-2 collected by NASA Stardust spacecraft, and present the preliminary results.
- 9:15 a.m. Zolensky M. * Bland P. Bradley J. Brearley A. Brennan S. Bridges J. Brownlee D. Butterworth A.
 Dai Z. Ebel D. Genge M. Gounelle M. Graham G. Grossman L. Harvey R. Ishii H. Kearsley A.
 Keller L. Krot A. Lanzirotti A. Leroux H. Messenger K. Mikouchi T. Nakamura T. Ohsumi K.
 Okudaira K. Perronnet M. Rietmeijer F. Simon S. Stephan T. Stroud R. Taheri M. Tomeoka K.
 Toppani A. Tsou P. Tsuchiyama A. Weber I. Weisberg M. Westphal A. Yano H. Zega T.
Mineralogy and Petrology of Comet Wild2 Nucleus Samples [#1203]
 First mineralogy and petrology results from the Stardust Mission.
- 9:30 a.m. Keller L. P. * Bajt S. Baratta G. A. Borg J. Brucato J. Burchell M. J. Colangeli L.
 d'Hendecourt L. Djouadi Z. Ferrini G. Flynn G. Franchi A. Fries M. Grady M. M. Graham G.
 Grossemy F. Kearsley A. Matrajt G. Mennella V. Nittler L. Palumbo M. E. Rotundi A.
 Wopenka B. Zolensky M.
Infrared, UV/VIS and Raman Spectroscopy of Comet Wild-2 Samples Returned by the Stardust Mission [#2062]
 Results from the preliminary examination of Stardust samples obtained using various spectroscopic methods will be presented.
- 9:45 a.m. Sandford S. A. * Aleon J. Alexander C. Butterworth A. Clemett S. J. Cody G. Cooper G.
 Dworkin J. P. Flynn G. J. Gilles M. K. Glavin D. P. Jacobsen C. Matrajt G. Robert F.
 Spencer M. K. Stephan T. Westphal A. Wirick S. Zare R. N.
The Preliminary Examination of Organics in the Returned Stardust Samples from Comet Wild 2 [#1124]
 The preparations for and latest results of the study of the organic portion of the samples of Comet Wild 2 returned by the Stardust Mission will be discussed.

- 10:00 a.m. Hörz F. * Borg J. Bradley J. P. Bridges J. Brownlee D. E. Burchell M. J. Cole M. J. Dai Z. R. Djouadi Z. Floss C. Franchi I. A. Graham G. A. Green S. F. Heck P. Hoppe P. Kearsley A. T. Leitner J. Leroux H. Teslich N. Marhas K. K. Schwandt C. S. See T. H. Stadermann F. J. Stephan T. Troadec D. Tsou P. Zolensky M. E. Stardust Cratering Team
Microcraters in Aluminum Foils Exposed by Stardust [#1148]
We will present preliminary results on the nature and size frequency distribution of microcraters that formed in aluminum foils during the flyby of comet Wild 2 by the Stardust spacecraft.
- 10:15 a.m. Leitner J. * Stephan T. Hörz F.
TOF-SIMS Analysis of Residues of Projectiles Shot onto Stardust Aluminum Foil [#1576]
Crater residues on Stardust Al foil from impact experiments using three different materials were analyzed by TOF-SIMS. Goal of this investigation is to evaluate the reproducibility of the chemical composition of the projectiles by TOF-SIMS analysis.
- 10:30 a.m. Hoppe P. * Heck P. Hörz F. Huth J. Marhas K. K. Messenger K. Snead C. Westphal A.
NanoSIMS Studies of Dust Projectile Shots into Stardust-type Aerogel and Aluminum Foils [#1546]
We present results of a feasibility study of isotopic analyses on Stardust samples, aimed at the discovery of presolar grains, with the NanoSIMS ion microprobe.
- 10:45 a.m. Bridges J. C. * Franchi I. A. Green S. F.
Extraction and Analysis of Microcrater Residues Using Focused Ion Beam Microscopy [#1664]
We describe results from a new technique using dual beam FIB/SEM with which impact residues can be extracted from microcraters and analysed by EDS. This will allow the determination of residue compositions from Stardust craters.
- 11:00 a.m. Stephan T. * Butterworth A. L. Snead C. J. Srama R. Westphal A. J.
TOF-SIMS Analysis of Aerogel Picokeystones — An Analogue to Stardust's Interstellar Dust Collection [#1448]
Tracks from ~0.5 μm particles, shot at ~20 km/s into aerogel to simulate Stardust's interstellar dust collection, were analyzed with TOF-SIMS. Particle residues distributed heterogeneously along the tracks can be localized and identified by TOF-SIMS.
- 11:15 a.m. Grady M. M. * Morlok A. Fernandes C. D. Johnson D.
Spectroscopy of Stardust from 200nm to 16 μm (With a Gap in the Middle) [#2032]
UV/Vis and IR spectroscopy are complementary, non-destructive techniques that can be used to identify the presence of a range of organic and inorganic, hydrated and anhydrous minerals within micron-sized grains. We look forward to applying these techniques to the Stardust materials.
- 11:30 a.m. Fairey S. Burchell M. J. *
Impacts in Aerogel at Low Temperatures [#1570]
The effect of the aerogel temperature on dust capture in aerogel is reported. Aerogel temperatures in the range 175–293 K were used. No significant influence on particle capture (track length, entrance hole, captured particle size) was found.