PLANETARY SCIENCE RESEARCH DISCOVERIES
CosmoSparks
Quick Views of Big Advances



## *Meteoritics & Planetary Science—More Cosmochemical Results from the Stardust Mission to Comet Wild 2*


*Meteoritics & Planetary Science* released a special issue in April, 2012 (volume 47, no. 4) on results related to the analyses of NASA's Stardust mission samples collected in the aerogel and aluminum foil. The Stardust results stand as proof of large-scale mixing in the early Solar System over hundreds of ***AUs***.

Though a subscription is needed to access the 19 articles online, the ***M&PS Table of Contents and abstracts*** are available to everyone. Here are the titles available:

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| Overview of the rocky component of Wild 2 comet samples: Insight into the early solar system, relationship with meteoritic materials and the differences between comets and asteroids | Sulfur four isotope NanoSIMS analysis of comet-81P/Wild 2 dust in impact craters on aluminum foil C2037N from NASA's Stardust mission |
| Comprehensive examination of large mineral and rock fragments in Stardust tracks: Mineralogy, analogous extraterrestrial materials, and source regions | The origin of crystalline residues in Stardust Al foils: Surviving cometary dust or crystallized impact melts? |
| Diverse forms of primordial organic matter identified in interplanetary dust particles | Experimental investigation of impacts by solar cell secondary ejecta on silica aerogel and aluminum foil: Implications for the Stardust Interstellar Dust Collector |
| Fine-grained precursors dominate the micrometeorite flux | Stardust interstellar dust calibration: Hydrocode modeling of impacts on Al-1100 foil at velocities up to 300 km s?1 and validation with experimental data |
| Raman spectroscopic investigation of two grains from comet 81P/Wild 2: Information that can be obtained beyond the presence of sp2-bonded carbon | Microstructure modifications of silicates induced by the collection in aerogel: Experimental approach and comparison with Stardust results |
| Thermochemical stability of low-iron, manganese-enriched olivine in astrophysical environments | Stardust impact analogs: Resolving pre- and postimpact mineralogy in Stardust Al foils |
| The size distributions of nanoscale Fe-Ni-S droplets in Stardust melted grains from comet 81P/Wild 2 | Automated searching of Stardust interstellar foils |
| Fine-grained material of 81P/Wild 2 in interaction with the Stardust aerogel | Experimental impact features in Stardust aerogel: How track morphology reflects particle structure, composition, and density |
| Aerogel tracks made by impacts of glycine: Implications for formation of bulbous tracks in aerogel and the Stardust mission | Cratering and penetration experiments in aluminum and teflon: Implications for space-exposed surfaces |
| Properties of original impactors estimated from three-dimensional analysis of whole Stardust tracks | |

*Meteoritics & Planetary Science* is an international monthly journal published by ***John Wiley & Sons*** on behalf of the Meteoritical Society, which is a non-profit scholarly organization founded in 1933 to promote the study of extraterrestrial materials, including meteorites and space mission returned samples, and their history. The membership of the society boasts 950 scientists and amateur enthusiasts from over 33 countries who are interested in a wide range of planetary science. Members' interests include meteorites, cosmic dust, asteroids and comets, natural satellites, planets, impacts, and the origins of the Solar System. For more information, visit ***www.meteoriticalsociety.org***.

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April 2012
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