



The Role of Water in Planetary Science Weekly CIPS Seminar

January 24, 2007

12:00pm - 1:00pm

544 Campbell Hall

Optional discussion with speaker: 1:00-2:00pm. Those staying for this discussion are asked to read the weekly assignment posted at <http://cips.Berkeley.edu/events/>

ANDREW WESTPHAL

*Space Sciences Laboratory
University of California, Berkeley*

**The Return of Stardust:
the first samples from the Kuiper Belt and
the Local Interstellar Medium**

In January 2006, the Stardust capsule landed in the Dugway Proving Grounds in Utah carrying, in aerogel tiles and in aluminum foils, the first bona fide samples from the Kuiper Belt, and the first samples of dust from the local Interstellar Medium. This is the first solid sample return mission since the 1970's, and the first ever from beyond the Moon. Here I summarize the results of the Preliminary Examination of the cometary sample -- a massive effort involving more than 200 scientists from around the world. In many ways, the Stardust extraterrestrial samples are the most technically challenging that we have ever faced. I will describe some techniques that have been developed for preparing these challenging samples for analysis. I will also give an update on the search for contemporary interstellar dust in the interstellar dust collector, using >20,000 highly sophisticated image processors -- human eyes and brains.

Weekly seminars organized by Mate Adamkovics (Astronomy) and Sarah Zarenek (EPS)

