

CAPTEM Fall 2014 Summary

As of January 2014 CAPTEM membership changes included the addition of Conel Alexander to Chair the Meteorite Working Group (MWG) subcommittee and Larry Nyquist to Chair the Genesis subcommittee. Julie Gross and Jeff Taylor have joined the Lunar subcommittee. JSC Curation personnel changes include the planned retirement of Carl Allen (Manager of the Astromaterials Acquisition and Curation Office and the Astromaterials Curator) in January, 2015 and departure of David Frank. Cindy Evans is currently Acting Manager of the Astromaterials Acquisition and Curation Office while this supervisory position is competed within JSC. JSC is actively advertising for candidates for the Astromaterials Curator position. New curation employees include Kimberly Aluums-Spencer (Genesis lab) and Wayne Gillespie (IT).

CAPTEM's Charter is being revised to explicitly explain how each subcommittee reviews and recommends allocations of samples. Revisions will reflect the inclusion of the Meteorite Working Group and the renaming of the "Hayabusa" subcommittee to the "Asteroid" subcommittee.

Findings of an ad hoc Lunar Contamination Cleanliness task force (chaired by Dimitri Papanastassiou) concerned: (1) contamination and heating of samples due to sawing, which might lead to organic contamination and possible loss of volatiles, (2) water absorption and chemisorption on chemically active sample surfaces, and (3) potential miss-orientation of samples during cutting, of interest to paleomagnetic studies. The task force will provide a formal write up prior to the Spring meeting.

Findings from the Informatics subcommittee (chaired by Andrew Westphal) that surveyed past sample requestors of the JSC collections included the need to: (1) focus on small particle catalogs, (2) increase community confidence that each catalog is complete and correct, (3) improve searchability, (4) improve reliability w/ trouble ticket/ tracking, and (5) include PI services that make collections and samples subscribable by RSS feed.

Review of the Asteroid Retrieval Mission by an ad hoc task force (led by Andrew Westphal) emphasized: (1) the assessment of textural and mineralogical heterogeneity of the sample body for site and sample selection, (2) active participation of a ground-based Science Team, (3) hand-held photodocumentation (and other hand-held instruments), (4) contamination control, (5) that collection should include at least 1000 g from two sites, stored separately, (6) mixed opinions for a core sample of regolith, (7) preservation of sample volatiles, (8) measurement of porosity and internal structure of the body, (9) survey of possible active deformation of the body, and (10) no need for an optical albedo study because it has already been done.

Curation requested that CAPTEM make a formal recommendation to NASA headquarters for funds to set up a high resolution, high kV micro-CT facility at JSC. All but one member voted to make acquisition a high priority.

Allocations since last meeting for Antarctic meteorites include 478 samples; for Lunar include 341 samples (plus 388 thin sections); for Cosmic Dust include 67 particles; for Genesis include 9 samples and 7 reference materials; and there was 1 approved allocation for a particle of Asteroid

Itokawa-Hayabusa. Samples collected in the 2013/14 ANSMET field season were stranded at McMurdo due to inclement weather and will not be brought to JSC until next season. A volatile organic assessment of the curation facilities (led by Marc Fries) will be initiated to minimize cross contamination among curation facilities.