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| CURATORIAL<br>NEWSLETTER | Date: October 26, 1977                                 | No. 17 |
|                          | <i>Patrick Butler Jr</i>                               |        |
|                          | Patrick Butler, Jr.<br>Acting Chief, Curatorial Branch |        |

CURATOR

Dr. Michael Reynolds was Acting Chief of the Curatorial Branch from July 18 to September 18, 1977. Dr. Patrick Butler, Jr. has been Acting Chief since then.

SAMPLE REQUESTS

The next LSAPT review meeting will be November 17-21, 1977. Please try to get your sample requests to us before November 10. The following meeting is scheduled for February 9-12, 1978.

FILLING ALLOCATIONS - MISSED ALLOCATIONS

Our goal is to have all allocations recommended by LSAPT at a meeting completed before the next meeting, usually a period of 8 to 10 weeks. A number of operational difficulties, however, can prevent attainment of this goal in individual cases.

Many of the delays are attributable to storage of about half of the working collection in three Interim Storage Vaults in different buildings at JSC. To minimize sample handling, the vaults are not visited more often than 4 to 6 months. Sometimes the period is more extended, particularly to avoid getting too many samples at one time in the processing laboratories during the hurricane season, June to October. By early 1979 all of the working collection will be reconsolidated in the vault of the new Curator Annex to building 31, now under construction, and this cause for delay will be eliminated.

A predominance of allocations from one mission is another cause for delay. Since there is usually only one processing cabinet for each mission, and samples may be processed only one at a time in a cabinet, allocations from that mission may be delayed. Production of thin sections may also be impacted by large influxes of work. This is especially the case for the sectioning of impregnated core remainders, where each core normally requires 45 sections.

Where there are pileups of samples for preparation, we attempt to do at least a few for everybody rather than working on one large allocation alone until its completion. Let us know if you have a preferred order for getting your allocations, or if you would like to have them all before starting to work on any one sample. Please do not hesitate to telephone (713-483-3274) or write about the schedule for filling your allocations.

## CORE SAMPLES

Core 74002 dissection has been completed and 141 allocations have been prepared and shipped or will be shipped within two weeks. Peels will be made and encapsulation of the remaining third of the core diameter will be done in about two months, following spectral reflectance imaging with a Vidicon system.

Core 15010 is in process of dissection. The sample is the lower section of a double drive tube (15011 is the upper section and will be dissected next) taken at the edge of Hadley Rille. Although the sampling site (Station 9A, see page 28 of the Apollo 15 Lunar Sample Information Catalog) is 3 km from the Apennine front, there are anorthosite-rich strata in the core.

Of the remaining deep drill cores, dissection of 70005 has been completed and 86 allocations prepared. Dissection of the last drill core section, 70003, has just been started.

## LUNAR SAMPLE ANALYSIS PLANNING TEAM (LSAPT)

Several members of the LSAPT will retire following this next meeting (November 17-21). They have served NASA and the scientific community well and long. They will be missed.

Dr. Dieter Heymann has served for 5 years as a member of group B and has been the Chairman of the Core Subcommittee. Under his guidance, the lunar cores have been carefully dissected and distributed to many investigators. He was instrumental in developing the methods of core handling and dissection in use today. Dr. Heymann's dedication to science has been a prime force in the proper selection of materials for those investigators in gas analysis and fission track studies.

Dr. Charles Simonds has served for 4 years as a member of group A and has chaired the Data Subcommittee. His extensive knowledge of the collection has enabled the committee to select the proper samples for issue, time after time. The basic characterization of the lunar samples was completed this last year because Dr. Simonds pushed for a complete data base. He also has been the LSAPT representative for the Apollo 11 and Apollo 14 recatalogue projects.

Dr. Everett Gibson has served for 3 years as a member of group B and is the present Chairman of the Consortia Subcommittee. His background in geochemistry and particularly carbon studies has been invaluable to group B investigators. Dr. Gibson pioneered the encapsulation of lunar samples for public display and has shown a keen interest in the lunar educational programs. Through his dedication and time the consortium studies of lunar samples have been defined and strengthened by the use of a set of guidelines and a regular reporting procedure.

New LSAPT members will be Dr. Carleton B. Moore and Dr. David S. McKay. Dr. Moore is Professor of Chemistry at Arizona State University and Director of the Niņinger Meteorite Collection. He was a Principal Investigator in the lunar sample program and participated in Apollo 11 and 12 preliminary examination in the LRL. He has published many papers in lunar sample and meteorite studies, in his specialty of analysis for the carbon and nitrogen abundances in rock materials. As a member of LSAPT, he will principally advise on sample allocations for chemical analysis.

Dr. McKay is a geologist/mineralogist on the staff of the Lunar and Planetary Sciences Division. He is one of the foremost authorities on the origin and history of the lunar soil and has built a wealth of knowledge about lunar cores. On LSAPT, he will advise on the allocation of samples for mineralogical/petrological studies and will be expected to lead the sub-group of LSAPT that plans the allocation of materials from lunar core tubes.

A list of the LSAPT membership is attached.

#### PUBLIC DISPLAYS

The public display subcommittee reviewed and the LSAPT approved a set of guidelines for long term lunar sample display. These guidelines spell out the procedure for evaluating requests from museums, planetariums, etc., for sample on permanent loan. Although a number of samples have already been placed on long term loan, there has been a definite need for a comprehensive policy.

The LSAPT also voted to increase the number of display samples to accommodate future museum requests. The NASA Office of Public Affairs expects a number of requests this year from museums in the midwest and the west.

As in the past, the LSAPT and the Curators Branch will work to obtain maximum public exposure to lunar samples within the guidelines of preserving and protecting the collection for science.

#### ANTARCTIC METEORITES

The Curatorial Branch is cooperating with Dr. William Cassidy (University of Pittsburgh) to use the technology developed in the handling of lunar samples for the low contamination collection and handling of Antarctic meteorites. Four foam-padded metal boxes, with about 3 cubic feet capacity each, have been packed with Teflon bags and two stainless steel bolt top containers equipped with aluminum gaskets, all cleaned to lunar sample specifications, for use by Dr. Cassidy on his second collecting expedition this Austral summer. Any carbonaceous chondrites found will be hermetically sealed in the bolt top containers. Other meteorites will be wrapped in Teflon bagging, which will be sealed with tape. All of the packaging tapes, containers, bags, and techniques have been tested in a -25° cold room. At the end of the field season the boxes with meteorites will be shipped under refrigeration to cold storage at JSC.

The protocols for handling, processing, distribution and characterization of the meteorites are being worked out under the auspices of the National Science Foundation and Dr. Cassidy. Our participation in this venture is one of support and assistance to Dr. Cassidy and the NSF. We do hope to provide a low contamination processing facility for these invaluable specimens but only under NSF guidelines.

Enclosure  
LSAPT Membership List

November 1977

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