LUNAR SCIENCE INFORMATION BULLETIN

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The Lunar Science Institute
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5TH LUNAR SCIENCE CONFERENCE

The Program Committee for the Fifth Lunar Science Conference (Larry Haskin and James Head, Co-Chairmen; Donald Burnett; Wulf Gose; William Phinney; John Pomeroy; and David Strangway) met January 24-26. 315 abstracts were accepted for publication. The abstracts published in two volumes, titled "*Lunar Science V*", have been mailed to all principal investigators. For technical reasons it was not possible to mail the abstract volumes to all people concerned, but they will be available at the meeting.

The Fifth Lunar Science Conference will be held at the Lyndon B. Johnson Space Center, March 18-22. A preliminary program has been mailed to principal investigators. The sessions will convene in the Building 1 Auditorium and in the recently built Gilruth Recreation Center. In addition to the regular talks, there will be a general session on Thursday afternoon; a presentation on results from the Skylab mission on Thursday night; and on Friday morning there will be a summary by six people on each of the conference topics. Registration for the meeting will start at 6:00 p.m., Sunday, March 17, at the Holiday Inn (NASA Road 1) and will continue during the meeting in Building 1 Johnson Space Center.

N. W. HINNERS APPOINTED DIRECTOR OF NASA LUNAR PROGRAMS OFFICE

Captain W. T. O'Bryant has recently retired as Director of the NASA Headquarters Lunar Programs Office. Captain O'Bryant has served in this position since formation of the office in 1973 and was also Director of the Apollo Lunar Exploration Office, the predecessor of the Lunar Programs Office. Dr. Noel W. Hinners, Deputy Director and Chief Scientist, has been named to the directorship to fill the vacancy left by Captain O'Bryant's retirement. The Lunar Programs Office is one of several programs offices in the Office of Space Science. The Director reports to Dr. John Naugle, NASA Associate Administrator for Space Science.

SOVIET-AMERICAN CONFERENCE ON COSMOCHEMISTRY OF THE MOON AND THE PLANETS

A Soviet-American Conference on the Cosmochemistry of the Moon and the Planets will be held in Moscow, June 4-8, 1974. The Conference is the culmination of a suggestion made by the Soviets in 1971, when the first details of US-USSR lunar cooperation were being worked out. Because of the rapid acquisition of new data in the last few years, the Conference has been delayed until now. In addition to discussion of new lunar data, the Conference will hopefully provide a forum for the presentation of recent results from USSR and US Mars, Mercury, Venus, and Jupiter probes.

Forty US scientists, representing a broad spectrum of lunar and planetary science, have been invited to attend. The number of invitees was agreed to by NASA and the USSR Academy of Sciences. Academician A.P. Vinogradov and Dr. N.W. Hinners are the Chairmen of the Soviet and US Organizing Committees, respectively.

New Lunar Topographic Maps

Twelve sheets in the 1:250,000 scale Lunar Mapping Program were published in the last month making a total of 36 sheets.

SHEET #	NAME	CORNER COORDINATES (NW)	(NE)	(SE)	(SW)
63C3	Peek	85°E 4°N	90°E 4°N	90°E 0°	85°E 0°
81B1	Haldane	80°E 0°	85°E 0°	85°E 4°S	80°E 4°S
81B2	Runge	85°E 0°	90°E 0°	90°E 4°S	85°E 4°S
81B3	Widmannstatten	85°E 4°S	90°E 4°S	90°E 8°S	85°E 8°S
81C1	Kreiken	80°E 8°S	85°E 8°S	85°E 12°S	80°E 12°S
81C2	Houtermans	85°E 8°S	90°E 8°S	90°E 12°S	85°E 12°S
82A1	Purkyne	90°E 0°	95°E 0°	95°E 4°S	90°E 4°S
82A2	Wyld	95°E 0°	100°E 0°	100°E 4°S	95°E 4°S
82A3	Ludwig	95°E 4°S	100°E 4°S	100°E 8°S	95°E 8°S
82A4	Hirayama	90°E 4°S	95°E 4°S	95°E 8°S	90°E 8°S
82D1	Brunner	90°E 8°S	95°E 8°S	95°E 12°S	90°E 12°S
82D2	Ganskij	95°E 8°S	100°E 8°S	100°E 12°S	95°E 12°S

These maps can be obtained by writing *Col. A. Strickland, Code SM, Lunar Programs Office, NASA Headquarters, Washington, D.C. 20546.* To see these maps or arrange for their loan contact Mrs. Jody Heiken, Photo/Map Library, Lunar Science Institute, 488-5200, ext. 36. For information concerning the technical content or a descriptive analysis contact Mr. Danny Kinsler, Lunar Science Institute, 488-5200, ext. 48. An index Map showing the areas covered by this series will be published in a forthcoming issue of the Information Bulletin.

Mars Quadrangle Charts Available

A cartographic series of 1:5,000,000 Mars Charts is being published as a cooperative project by the U.S. Geological Survey (USGS), Flagstaff, Arizona and the Jet Propulsion Laboratory, Pasadena, California. To date, there are 35 quadrangles available as semi-controlled mosaics and 5 quadrangles completed in controlled mosaic format. These quadrangles are considered USGS Open-File Reports. They are available for study at the USGS Open-File Depositories and at the LSI Photolibrary. Further information concerning these products can be obtained by contacting:

U. S. Geological Survey
Astrogeology Branch
601 East Cedar Avenue
Flagstaff, Arizona 86001

A general shaded relief map of Mars (#I-810) is sold for $1.00 by:

U. S. Geological Survey
General Services Building
18th and F Streets, N.W.
Washington, D. C. 20242

Conference on "Apollo Astronomical Observations and Their Cosmological Implications" To Be Held at LSI

During the Apollo mission major emphasis was placed on experiments which dealt with measurements concerning the geological, geochemical, and geophysical environment of the Moon. Many of the instruments used for these measurements were also used for performing rather important astronomical observations in the radio, UV, X-ray, and gamma ray region. Also, measurements of the cosmic ray flux and the effects of cosmic ray bombardment with respect to the activation of materials were obtained. Detailed spectra have been obtained from the so-called diffuse background. This information may have rather significant cosmological implications. In addition, detailed spectra and time history of X-ray and gamma ray bursts were obtained. A session on Apollo Astronomical Observations and Their Cosmological Implications will convene at the LSI, at 9:00 a.m., on Saturday, March 23, following the Fifth Lunar Science Conference. Anyone interested in further information should contact the program chairman, *Dr. Jacob Trombka of Goddard Spaceflight Center, Code 641, Greenbelt, Maryland 20771, (301)982-5941.*

New Journal Announced

The American Geophysical Union has announced the formation of a new journal to be called *GEOPHYSICAL RESEARCH LETTERS*. Dr. Noel Hinners, NASA-HQ, will be editor of this new letters journal which will strive to publish short (4-printed pages) articles within 5 to 9 weeks. Further information about the journal and the procedure for submitting papers can be obtained from *Dr. Hinners, Code SM, Geophysical Research Letters, NASA, Washington, D.C. 20546,* or the *American Geophysical Union Editorial Office, Geophysical Research Letters, 1707 L Street, N.W., Washington, D.C. 20036.* (Copy of the initial announcement of the journal is also available at the LSI Library.)

Apollo 17 Preliminary Science Report

Mr. Floyd Roberson, NASA Headquarters, reports that the *APOLLO 17 Preliminary Science Report (PSR), NASA SP-330,* should leave the printer about March 1. Distribution should be sometime in mid-March. This 710-page document covering the initial findings from the Apollo 17 mission can be obtained from the *Superintendent of Documents (SOD), Government Printing Office, Washington, D.C. 20402.* Send $7.95 (check, SOD coupons, or charge to deposit account) and request a copy of NAS 1.21:330. Orders to the SOD must be prepaid.

Current Lunar Articles

Journals Received in LSI Library 2/11-22/74

Brett, R.
The lunar crust: a product of heterogeneous accretion or differentiation of a homogeneous Moon?
GEOCHIMICA ET COSMOCHIMICA ACTA 37, 2697-2703, 1973.

Dunlop, D. J.
Theory of magnetic viscosity of lunar and terrestrial rocks
REVIEWS OF GEOPHYSICS AND SPACE PHYSICS 11, 855-901, 1973.

Eberhardt, R., Geiss, J., Graf, H., Grogler, N., Krahenbuhl, U., Schwaller, H., Stettler, A.
Noble gas investigations of lunar rocks 10017 and 10071
GEOCHIMICA ET COSMOCHIMICA ACTA 38, 97-120, 1974.

Jordan, J. L., Heymann, D., Lakatos, S.
Inert gas patterns in the regolith at the Apollo 15 landing site
GEOCHIMICA ET COSMOCHIMICA ACTA 38, 65-78, 1974.

Malysheva, T. V., Jurash, V. V.
Mossbauer spectroscopy of lunar samples
GEOCHEMISTRY INTERNATIONAL 10, 87-91, 1973.

Onuma, N., Clayton, R. N., Mayeda, T. K.
Oxygen isotope cosmothermometer revisited
GEOCHIMICA ET COSMOCHIMICA ACTA 38, 189-192, 1974.

Reed, G., Howell, F. J., Clark, T. A.
Extended glow preceding reappearance of Saturn during a lunar occultation
NATURE 247, 447-448, 1974.

Ridley, W. I., Hubbard, N. J., Rhodes, J. M., Weismann, H., Bansal, B.
The petrology of lunar breccia 15445 and petrogenetic implications
JOURNAL OF GEOLOGY 81, 621-632, 1973.

Saxena, S. K., Walter, L. S.
A statistical, chemical and thermodynamic approach to the study of lunar mineralogy
GEOCHIMICA ET COSMOCHIMICA ACTA 38, 79-96, 1974.

Taylor, S. R., Gorton, M. P., Muir, P., Nance, W. B., Rudowski, R., Ware, N.
Composition of the Descartes region, lunar highlands
GEOCHIMICA ET COSMOCHIMICA ACTA 37, 2665-2684, 1973.

LUNAR SCIENCE CALENDAR - 1974

MARCH

Sun	Mon	Tue	Wed	Thurs	Fri	Sat
					1 LSI Seminar 4:00 p.m. *S.R. Taylor*	2
3	SEMINAR: INSTRUMENTATION IN ASTRONOMY, Tucson, AR	5	6 USRA Board of Trustees	7	8 LSI Seminar 4:00 p.m. *S.F. Singer*	9
10	11	12	13	14	15	16
17	18	19	20 FIFTH LUNAR SCIENCE CONFERENCE Houston, Texas	21	22	23 Apollo Astronomical Conference *(See p. 3)*
24	25	26	27 THIRD SOLAR WIND CONFERENCE	28	29	30
31	Asilomar	Conference Grounds, Pacific Grove, California				

APRIL

	1	2	3	4	5 LSI Seminar 4:00 p.m.	6
7	8	9	10 AMERICAN GEOPHYSICAL UNION MEETING Washington, D. C.	11	12	13
14 *EASTER*	15 USSR-USA CONF. PAPERS DUE	16	17	18	19 5th L S CONF. PROC. MS DUE	20
21	22	23	24 LUNAR SAMPLE ANALYSIS PLANNING TEAM MEETING Houston, Texas	25	26	27
28	29	30				

COMING EVENTS

June 4-8	*Soviet-American Conference on Cosmochemistry of the Moon and the Planets, Moscow, USSR*
June 15	*Deadline for Geological Society of America Abstracts*
June 24-July 1	*17th Plenary Meeting - COSPAR, Brazil*
Oct. 10-11	*8th GEOP Conference: Lunar Dynamics and Selenodesy, Columbus, Ohio (Sponsor: AGU)*

For additional information, contact:

Mrs. Joan Shack
The Lunar Science Institute
713/488-5200 x30

Lunar Geology Conference, January 14-16, 1974

The objective of this conference held at the Lunar Science Institute was to bring together persons working with the lunar samples and those using orbital photography and earth-based telescopic observations to develop a regional view of the Moon.

The Monday sessions were devoted to impact processes. Much of the discussio was related to the lunar highlands, with the origin of the Cayley Formation and petrologic and photogeologic characterization of impact melts as recurring themes. Tuesday sessions were divided: (1) magmatic history of the Moon as viewed by a photogeologist and by a petrologist; and (2) geophysical models and tectonic activity on the Moon.

The Wednesday sessions featured discussions of the characterization and genesis of the lunar regolith. Several of the reviews and discussions emphasized the importance of micrometeorite bombardment in generating the lunar regolith. A short session Wednesday afternoon was centered around the access and availability of lunar data to investigators. Photographic, cartographic, geophysical, and sample data were discussed with special emphasis on the state of lunar mapping and lunar geophysical data.

The 132 participants representing various segments of the lunar community were from NASA Headquarters and other NASA Centers, US and foreign government agencies, and American and foreign universities. A conference summary is being prepared for publication and will be distributed at a later date. An agenda and participant list are available from the Lunar Science Institute (contact Mrs. Joan Shack, 488-5200, ext. 30).

Opportunities for Scientists at the Lunar Science Institute (LSI)

The LSI is a center for advanced lunar research which operates a "Visiting Scientist Program" open to any domestic or foreign scientist. Three classifications exist: (1) Senior scientists (equivalent to assistant, associate, or full professors) may apply for a Visiting Scientist tenure extending from a few days to two years. (2) Post-Doctoral openings are available to recent graduates for independent or cooperative research at LSI or at Johnso Space Center. (3) Graduate fellowships are available contingent in part on the consent of the appropriate graduate supervisor and home university administrator. Salary and living expenses, travel funds, and duration of appointments are negotiated on a case-by-case basis. Considerable flexibility exists with the exception that Graduate Fellows are usually supported in part by their home university. Initial application for any position should consist of a resume and a letter to the Director of the LSI very briefly outlining the proposed research topic, facilities required, appointment time-frame, desired salary, living and travel support, and any special requirements. This letter will provide the context for subsequent correspondence and reviews which should typically require only 4 to 6 weeks.

For "Guest Scientists" (scientists visiting in the area) an office, located on the first floor of the LSI, is available for use. Call the LSI switchboard during regular working hours and leave your name, organization, and local phone for after-hours and weekend access to the Institute. A phone-in roster of scientists visiting the area is also maintained. This roster is accessible at any time. Feel free to use these services and consider the LSI as a message center, meeting place, and a quiet place to work, read, or pursue research whenever you visit Houston. (LSI phone: 713-488-5200).