

NUMBER 23 MAY 1980

CARIBBEAN PLATE STEERING GROUP

The LPI recently established a Caribbean Plate Steering Group, chaired by Kevin Burke, SUNY at Albany, to guide research in the Caribbean area within the interest of the NASA-OSTA Offices of Geodynamics and Non-Renewable Resources. The Steering Group, which represents a range of skills, will treat the Caribbean as a test-case for achievement of NASA's goals of attaining (1) a scientific understanding of Earth dynamics through the application of space methods and technology; and (2) a scientific understanding



of the evolution, three-dimensional structure, composition and resource distribution of the crust. The Steering Group will assure maintenance of a synoptic study of the Caribbean and ensure that participatory studies make the fullest appropriate use of innovations in remote sensing and potential field and geodynamic measurements.

The Steering Group has met twice, in February and in April. A position paper on a Caribbean Plate Project is in preparation with plans for its delivery to NASA Headquarters during the summer. At the April meeting, plans were made for a fall Workshop on the coordination of the Project. Discussions also covered the development of an on-line research bibliography to be housed at the LPI. To make this bibliography as complete and useful as possible, the LPI Library/Information Center requests that interested researchers send reprints or other publications on the Caribbean regardless of chronological age to Mr. Stephen Tellier/CPP at the LPI.

For further information on this project contact Dr. Geoff Wadge at the LPI, (713/486-2146).

LPIB No. 23

MCGETCHIN MEMORIAL FUND

A memorial fund has been established in honor of Tom McGetchin, director of the Lunar and Planetary Institute from 1977 until illness forced him to resign in June 1979. Tom died on October 22, 1979.

The fund will endow a scholarship for summer field studies by students working in volcanology. In addition, the new building at the LPI will be dedicated to Tom this summer, and a small portion of the fund will be used for a commemorative stained glass window over the main entry.

Steve Dwornik, former Planetary Geology Discipline Scientist at NASA Headquarters, has agreed to serve as chairman of the fund raising committee. Readers of the Bulletin will be contacted later by mail regarding details of the fund. In the meantime, anyone wishing to contribute should make donations (tax deductible) payable to: "McGetchin Memorial Fund/USRA" and send them to: McGetchin Memorial Fund, Universities Space Research Association, American City Building, Suite 311, Columbia MD 21044.

NASA SPACE SCIENCE NOTICE--JUPITER DATA ANALYSIS PROGRAM

This notice is to call attention to a continuing opportunity to submit unsolicited proposals for participation in a new Jupiter Data Analysis Program (JDAP). It is recognized that the data that exist from the Voyager encounters with Jupiter constitute a national resource, and that it is necessary to conduct a program whereby Voyager and non-Voyager program scientists have an opportunity to analyze the data fully and to obtain additional or alternate interpretations of the data. Implementation of this program is contingent upon availability of funds.

The program includes laboratory experimentation; photointerpretation; theoretical, analytical, field, and comparative studies; and cartographic compilation.

The JDAP is a planned three-year program to begin in FY'81 (October 1, 1980). The program is an open program in which unsolicited proposals may be submitted at any time. However, it is contemplated that proposals will be reviewed by a scientific peer group on a periodic basis. Thus, to receive funding commencing early in FY'81, proposals should be received at NASA as soon as practical but not later than the end of May 1980. Proposers who submit by the end of May can expect notification of results of the proposal review during September 1980. Proposals received after the end of May 1980 will be held for a later review cycle.

The Jupiter Data Analysis Program is managed by the Planetary Division, Code SL-4, NASA Headquarters, Washington, DC 20546. Dr. M.A. Mitz (202/755-3780) is designated as Program Scientist.

Page 3

WORKSHOPS AT LPI

Drs. James Taranik and Mark Settle of the NASA-OSTA Branch of Non-Renewable Resources convened a Workshop on Geological Applications of Thermal Infrared Remote Sensing Techniques at the LPI on February 11-13, 1980. Twenty scientists from universities, government facilities, and private industry participated in the Workshop which was co-chaired by Hugh Kieffer of the U.S. Geological Survey, Flagstaff and Robert Vincent of Geospectra Corporation, Ann Arbor. Session topics included Earth Applications of Thermal IR Techniques, Planetary Exploration Applications of Thermal Infrared Techniques, and Remote Sensing Thermal Infrared Instrumentation: Past, Present, and Future. A workshop volume, containing abstracts of talks presented during the meeting and an extensive bibliography compiled from inputs from the participants, is now in preparation and will be available from the LPI in the Summer 1980.

The Lunar and Planetary Institute hosted approximately 50 scientists in a Workshop on the Rio Grande Rift on April 21-23, 1980. The Workshop was co-sponsored by the Planetary and Earth Sciences Division of the Johnson Space Center and the Non-Renewable Resources Branch of the NASA Headquarters Office of Space and Terrestrial Applications. Dr. William Muehlberger, University of Texas, Austin chaired sessions that included overviews of the geology, geophysics, and petrology/geochemistry of the Rio Grande Rift and remote sensing techniques applicable to the Rift. Abstracts from the talks along with other relevant materials, are now being compiled and will be available from the LPI during the Summer 1980.

CHANGE TO THE PLANETARY GEOLOGY PROGRAM PEER REVIEW SYSTEM

The Planetary Geology Review Panel (PGRP) will meet separately from the Lunar and Planetary Review Panel (LPRP). The PGRP will be expanded in size and expertise to include the topical areas included in the Planetary Geology Program. As with LPRP, the PGRP will be administered by the Lunar and Planetary Institute. PGRP will meet biannually, once in conjunction with the Planetary Geology Principal Investigators' meeting in January and once in late June. To change smoothly to this new schedule, an interim panel review meeting in late August 1980 is planned. Therefore, proposals received at LPI before late June—early July will be reviewed in August. Proposals received after late June—early July but before October 1980 will be reviewed in January 1981. Proposers whose proposals are included in this August review will be notified of results by October 1980. All new proposals to the Planetary Geology Program should be sent to:

Planetary Geology Review Panel Lunar and Planetary Institute 3303 NASA Road One Houston TX 77058

Eighteen (18) copies (complete with progress report where applicable), including one original signature copy, are required.

LPIB No. 23

11TH L&PSC WRAP-UP

Some 650 conference participants from eleven countries gathered in Houston, March 17-21 to attend the 11th Lunar and Planetary Science Conference. There were 300 oral presentations based on the 459 abstracts submitted to the Conference and contained in this year's abstract volume, Lunar & Planetary Science XI. Fifteen poster sessions were displayed for review and discussion by conference attendees.

In addition to the regular sessions structured around the seven major topics addressed at the Conference, special sessions were held during the week. These sessions included: Application of Remote Sensing Techniques to the Study of the Earth; Antarctic Meteorites; Galilean Satellites; the Exploration of Venus; and a special lecture by Dr. Farouk El-Baz on his recent trip to China.

Coming in the wake of the President's announcement of the sacrifices to be made to balance the budget, much discussion during the conference concerned the future of the space science program in the U.S. A brief statement by Dr. Thomas Mutch, Associate Administrator of Space Science, at the public lecture on Wednesday evening, helped to disperse some of the gloom. He assured the audience that, even though we are all in a belt-tightening mode, there will be new starts, and there will be a continuance of space science research at NASA.

The Proceedings of the Conference will again be published by Pergamon Press in the same format as the previous ten. The LPI Publications Office is charged with the responsibility for the management and technical editing of the volumes. They should be available by 1 January 1981.

The Abstract volume is still available in limited numbers from the Administration Office of the LPI. In the U.S. the cost is \$2.00 prepaid. Foreign mailing costs are based on the country and the method of sending. The surface rate is \$4.00 while the air mail rate varies from \$20-\$28 depending on the country of destination. Foreign requestors should indicate surface mail or air mail and they will be billed accordingly.

FOR SALE

A set of the Proceedings of the Ninth Lunar and Planetary Science Conference is available for \$50.00. If anyone is interested in buying them contact Dr. Robert C. Reedy, Los Alamos Scientific Laboratory, Mail Stop: 514, P.O. Box 1663, Los Alamos NM 87545.

LPIB No. 23 Page 5

TOPICAL CONFERENCE: MULTI-RING BASINS: FORMATION AND EVOLUTION

The first announcement has been distributed for an LPI Topical Conference on Multi-Ring Basins: Formation and Evolution. The meeting scheduled for November 10-12, 1980 is designed to bring together interested parties from all disciplines to mull over the problems involved in the study and interpretation of multi-ring basins as models of origin, physical models, significance of occurrence, planetary distribution, and terrestrial examples. The Organizing Committee for the meeting includes: Peter Schultz, LPI, and Carroll Ann Hodges, USGS, as co-convenors, with other members being Richard F. Grieve (Dept. of Energy, Mines and Resources, Ontario); Odette James (USGS); H.J. Melosh, (SUNY at Stony Brook); Dennis Orphal (California Research and Technology, Livermore); Carle Pieters (Brown University); and George Wetherill (Carnegie Institution). For more information on this meeting contact Pamela Jones, Symposia Office, LPI 713/486-2150.

METEORITICAL SOCIETY MEETING

The 43rd annual meeting of the Meteoritical Society will be held at the University of California, San Diego, in La Jolla, California, September 2-6, 1980. The sponsors of the meeting include: University of California, San Diego, the Lunar and Planetary Institute, and Cal Space Institute. The deadline for abstract submission is 15 June 1980. The program will include oral presentations and two field trips: a one-day field trip to the San Diego County Tourmaline Mines and the other a visit to the Palomar Observatory and San Juan Capistrano Mission. To submit an abstract contact Ms. Paula Robertson, LPI, 713/486-2161. For additional information about the meeting contact: Kurt Marti, B-017, Chemistry Department, University of California, San Diego, La Jolla, CA 90293. (714/452-2939)

DIVISION FOR PLANETARY SCIENCE/AAS ANNUAL MEETING

The AAS/DPS annual meeting will be held in Tucson, AZ 14-17 October 1980. The conference hotel will be the Ramada Inn. Conference rates at the hotel will be available until 22 September 1980. The deadline for submission of titles of papers to be presented is August 1. Abstracts will be due by August 15. Abstracts should be submitted in the form used in the AAS Bulletin. Additional information about the meeting can be obtained from the conference chairman, Dr. Brad Smith at the Lunar and Planetary Laboratory, University of Arizona, Tucson AZ 85721 (602/626-3734). The local arrangements chairman is Dr. William V. Boynton, also at LPL (602/626-3483)

LPIB No. 23

TEPHRA STUDIES AS A TOOL IN QUATERNARY RESEARCH

A NATO Advanced Studies Institute on this topic will be held in Iceland from June 18-30, 1980. The Advanced Studies Institute will consider all applications of tephra (volcanic ash) studies to Quaternary geological problems: dating, correlation, stratigraphy on land and in the ocean, history of active volcanoes, eruption prediction and styles of volcanism. The Institute will include five days of field excursions in southern Iceland examining pyroclastic deposits. Interested persons should apply for further information to: Dr. R.S.J. Sparks, Dept. of Mineralogy and Petrology, University of Cambridge, Cambridge CB2 3EW England.

ASTRONOMICAL SOCIETY OF THE PACIFIC

The 1980 Scientific Meeting of the Astronomical Society of the Pacific will be held July 7-12, 1980, at the University of Arizona, Tucson. The meeting will include a technical symposium on the importance of ground-based astronomy in the space age; a day-long workshop on incorporating astronomy into the elementary and high school curriculum (credit available through the University of Arizona); Guided tours of the Kitt Peak and Multiple Mirror Telescope Observatories, contributed scientific papers, nontechnical lectures on new developments in astronomy, and papers by and for amateur astronomers. The meeting will be held jointly with the Western Amateur Astronomers. Further information can be obtained from the Society offices. Please send a stamped self-addressed envelope to: Summer Meeting, A.S.P., 1290 24th Avenue, San Francisco CA 94122.

EUROPEAN GEOPHYSICAL SOCIETY and EUROPEAN SEISMOLOGICAL COMMISSION,

The seventh annual meeting of the EGS and the seventeenth general assembly of the ESC will be held in Budapest, Hungary, 21-29 August 1980. The meetings will be devoted to the sciences of the solid earth, hydrosphere, atmosphere, magnetosphere and interplanetary space, to the moon and planets, seismology and earthquake hazards and prediction.

The meeting is intended to have an open character and will chart its course on the basis of submitted papers. A call for participation and papers has already been distributed. All inquiries should be sent to the: Local Organizing Committee, EGS-ESC Budapest '80, Geophysical Department, Eotvos University, H-1083 Budapest, Kun Bela ter 2, Hungary. Telephone: 343-953 334-585 342-785, Telex: 226032 GEOSZO H.

LPI SUMMER INTERN PROGRAM - June 2-August 8, 1980

Research advisors from the LPI and the Johnson Space Center have just completed the difficult task of selecting one Summer Intern for each of the thirteen positions defined for Summer 1980. This summer's program will be the fourth in a series of highly successful Intern programs designed to allow undergraduate or newly-graduated students to participate in actual hands-on reseach in the fields they are considering for career focus. Interns were selected out of a field of approximately 120 very talented and qualified candidates who applied for the positions. In addition to participating in research on their own projects, the interns will have opportunities to present a profile of their research to their colleagues and advisors, and to interact with scientists from JSC, LPI and with visiting researchers from the lunar and planetary science community. Some of this interaction will occur in weekly "brown-bag lunch" seminars, where informative presentations and lectures will occur each Friday noon. 1980 interns, their advisors and projects are listed below.

INTERNS	ADVISORS	PROJECTS
Mr. James T. Constantopoulos California State University Northridge, California	Dr. David McKay Johnson Space Center	SEM/EDX studies of coatings on desert sand grains
Mr. James M. Devine West Chester State College West Chester, Pennsylvania	Dr. Herbert Zook Dr. Uel Clanton Johnson Space Center	SEM/EDS studies of impact pits in Skylab 4
Ms. Debra R. Douglas Olivet Nazarene College Kankakee, Illinois	Dr. David McKay Johnson Space Center	SEM studies of extra-terres- trial dust particles
Ms. Andrea Handler University of Puerto Rico Mayaguez, Puerto Rico	Dr. Geoffrey Wadge	A study of the volatile contents and their effect on the emplace- ment and eruption of the late Cainozoic alkalic rocks of the northwestern Caribbean
Mr. Bradley A. Miller Purdue University West Lafayette, Indiana	Dr. Peter Schultz Lunar and Planetary Institute	Computer simulations of impact cratering phenomena
Mr. David L. Naftz University of Southern Colorado Pueblo, Colorado	Dr. Gary Lofgren Johnson Space Center	Petrographic study of the crystallization paramenters of a lava flow
Mr. Duane C. Phinney University of Minnesota Minneapolis, Minnesota	Dr. Jeffrey Warner Johnson Space Center	Tectonics of Ganymede
Ms. Barbara L. Ransom Indiana Univeristy Bloomington, Indiana	Dr. Everett Gibson Johnson Space Center	Analysis for carbon, sulfur and water in samples from the Dry Valley, Antarctica
Ms. Janet D. Sage Cook College, Rutgers Univ. Bloomington, Indiana	Dr. Frederich Hörz Johnson Space Center	Petrography and chemistry of large lunar glass objects (LGO)
Mr. Robert Spangler Bowling Green State University Bowling Green, Ohio	Dr. Daniel Anderson Johnson Space Center	Ion optics in the Ion Microprobe
Mr. William E. Vanderlinde University of Virginia Charlottesville, Virginia	Dr. Douglas Phinney Johnson Space Center	Ion Probe/isotopic ratios in primitive inclusions from meteorites
Mr. Carl M. Wolfteich Hamilton College Clinton, New York	Dr. Wendell Mendell Johnson Space Center	Infrared spectroscopy of terrestrial geologic materials
Mr. Perry A. Wood Gettysburg College Gettysburg, Pennsylvania	Dr. Daniel Anderson Johnson Space Center	Ion Optics in the Ion Microprobe

LPIB No. 23

THE REGIONAL PLANETARY IMAGE FACILITIES (RPIF)

The system of Regional Planetary Image Facilities represents a coordinated effort to provide easy access to planetary data products by scientists, students, educators, and the general public. each facility has different specific strengths, the close cooperation among RPIF members permits accessing materials without unnecessary trips to more distant centers. Moreover, this cooperation enables each facility to identify mutual needs and initiate solutions such as proper preservation of materials and a flexible system for data retrieval (e.g., the BIRP computer software package). The RPIF's are not designed to provide hard copy products for permanent retention, but are established to provide assistance in both locating the necessary data products and in accessing them through the National Space Science Data Center. Each Facility welcomes the opportunity to show you what is available whether for detailed research or public lectures. The RPIF's supported by the Planetary Geology Programs Office at NASA Headquarters are located at the following centers:

SPACECRAFT IMAGERY CENTER
Lunar & Planetary Laboratory
University of Arizona
Tucson AZ 85721
Facility Director:
Mr. Robert G. Strom
Librarian:
Gail S. Georgenson
(602/626-4861)

PLANETARY IMAGE FACILITY
Lunar & Planetary Institute
Houston, TX 77058
Facility Director:
Dr. Peter H. Schultz
Librarian:
Ron Weber
(713/486-2172)

PLANETARY DATA FACILITY
Astrogeology Branch
U.S. Geological Survey
Flagstaff, AZ 86001
Facility Director:
Dr. Elliot Morris
Librarian:
Jody Swann
(602/779-3311)
(FTS: 261-1505)

PLANETARY IMAGE FACILITY
Jet Propulsion Laboraotry
California Institute of Technology
Pasadena, CA 91103
Facility Director:
Dr. R. Stephen Saunders
Librarian:
Kathy Lee
(213/354-3343)
(FTS: 792-3343)

BROWN REGIONAL PLANETARY
DATA CENTER
Brown University
Providence RI 02912
Facility Director:
Dr. James Head, III
Librarian:
John Crowley
(401/863-3243)

SPACECRAFT IMAGING CENTER Cornell University Ithaca, NY 14853 Facility Director: Dr. Joseph Veverka Librarian: Margaret Dermott (607/256-3833)

PLANETARY IMAGE FACILITY
McDonnell Center for Space
Sciences
Washington University
St. Louis, MO 63130
Facility Director:
Dr. Raymond E. Arvidson
Librarian:
Betty Weiss
(314/889-5679)

Page 9

NEW PUBLICATIONS

NASA Publications A number of publications on planned and recent space programs have been prepared and are generally available from the Superintendent of Documents, Government Printing Office, Washington, DC 20402. Although this agency requires prepayment on all orders, they will now accept Master Charge or VISA credit cards. Just include the account number and expiration date on your order to them. PLEASE do not send orders for these publications to the LPI. We are NOT a distribution center for SOD documents.

Mars A new atlas comprised of small scale maps and photomosaics covers the entire surface of Mars. The cartographic contents are reduced-scale versions of the 1:5,000,000 topographic series of 30 quadrangles compiled by the U. S. Geological Survey in cooperation with the National Aeronautics and Space Administration. Most of the quadrangles were compiled with data from the Mariner 9 spacecraft, gathered in 1972. A few sheets, however, incorporated information derived from the two Viking Orbiter spacecraft from 1976 to 1978.

The atlas contains several useful appendices: Appendix A includes a gazeteer of feature nomenclature; Appendices B and C include discussions of mapping procedures, and Appendix E contains a list of all maps that were available from the USGS map distribution centers.

This publication is: Atlas of Mars: the 1:5,000,000 map series, by R.M. Batson, P.M. Bridges, and J.L. Inge. Washington, DC, SOD, 1979. 146 pp. NASA SP-438. \$7.00. Stock No. 003-000-00780-9

Pioneer Saturn Encounter
Ploneer 10 and 11 spacecraft were the first to cross the asteroid belt and encounter Jupiter. Pioneer 11, renamed Pioneer Saturn, continued on to give us our first close view of the spectacular ringed planed Saturn and its system of moons. This publication describes the far-reaching Pioneer missions and presents an interesting selection of the photographs returned by Pioneer 11 of Saturn and its largest moon, Titan. These photographs mark the first time that Saturn has been seen, not from Earth, but at close range from an instrument on board a spacecraft.

This publication containing 28 pages with many illustrations is available from SOD as Stock No. 033-000-00774-4 for \$3.00



Space Shuttle at Work This new NASA SP-432 by Howard Allaway is a description of the Space Shuttle ... our new space transportation system. It describes how it came to be, why it is designed the way it is, what we expect of it, and how it may grow. It is well illustrated with diagrams and artists' renditions of the flight of Shuttle. It also contains a two-page fold-out of the cut-away drawing of shuttle done by Barron Storey. A useful index at the back provides easy access to the various topics covered in the booklet. This 76 page publication provides a good summary of the shuttle, its development, engineering aspects, and future programs.

This publication is available from SOD as Stock No. 033-000-00779-5 for \$3.75.

Pioneer-Venus Posters These two 8"x10" color lithographs depict the planet Venus as seen by the Pioneer Venus orbiter during the period December 1978 to February 1979. The lithograph entitled "Venus at Mid-Day" is a full-disk view of Venus shrouded in clouds as seen by the orbiter from a distance of 40,600 miles. "Pioneer Looks at Venus" is a composite of four pictures which show what the Pioneer Venus orbiter sees as it orbits the cloud-shrouded planet once every 24 hours. Both of these interesting NASA lithographs are suitable for framing and they are sold only as a set.

Available from SOD as Stock No. 033-000-00764-7 for \$1.50

REMEMBER!!! ORDER FROM SOURCES GIVEN.....NOT FROM THE LPI! AVOID DELAYS

JACKSON VOLUME

The American Journal of Science announces the publication of the Jackson Volume in memory of Everett Dale Jackson (v. 280-A). The approximately 900 page volume will be published in 2 parts. Part 1 will contain five articles on "Cumulus processes and layered intrusions" and ten articles on "Ophiolites and related rocks". Part 2 will contain eleven articles on "Mantle xenoliths and their host magmas" and eight articles on "Hawaiian and other oceanic volcanism." The volume will be available in the Spring 1980 from American Journal of Science, Kline Geology Laboratory, Yale University, Box 2161 Yale Station, New Haven CT 06520. Prepublication Price \$40.00 per copy; Publication Price \$50.00 per copy postpaid. (The Jackson volume will be distributed as a bonus to all subscribers who have renewed their subscriptions to AJS prior to publication date).

Page 11

MAPS OF THE GALILEAN SATELLITES

The U.S. Geological Survey has produced maps of Io, Europa, Ganymede, and Callisto drawn from Voyager 1 and 2 photos at 1:25,000,000 scale. The maps are available from the U.S. Geological Survey, Branch of Distribution at either Denver Federal Center, Denver CO 80225 or 1200 South Eads Street, Arlington VA 22202 for \$1.25 each. The maps are being reproduced in Science News at a slightly reduced scale (1:29,000,000). The map of Io appears in the April 19, 1980 issue of the magazine and is accompanied by an article written by Jonathan Eberhart. To order the maps from USGS, enclose payment and order the following:

Io Shaded Relief and Albedo	I-1240
Europa Shaded Relief and Albedo	I-1241
Ganymede Shaded Relief and Albedo	I-1242
Callisto Shaded Relief and Albedo	I-1239

The maps are available for reference at the seven Regional Planetary Image Facilities. (See RPIF location list on page 8 this Bulletin). Although the facilities do not sell photos or maps, visitors are encouraged to browse the collections. Assistance is available for selecting and obtaining the materials.

A CLOSE LOOK AT THE MOON

Dr. G.Jeffrey Taylor has currently authored an easy-to-understand account of the findings from the Apollo missions. Dr. Taylor, a senior research scientist in the Dept. of Geology and Institute of Meteoritics, University of New Mexico, has been involved in research on lunar samples since 1970 and has contributed more than fifty articles about moon rocks and meteorites to scientific journals. The book is written in an easy style suitable for grades 4-8 and is richly illustrated with many pictures which aptly correlate with the text. Unlike so many books written for children, this book does have an index to lead the reader to specific topics in the study of the Moon. The 95-page book is published by Dodd, Mead & Company for \$5.95.

REMEMBER! The publications listed here are <u>not</u> available from the LPI. Please contact the source given with each item to obtain a copy. If you know of any new materials which could be useful to our readers, please send information about them to the Editor, this <u>bulletin</u>. Review of the items here does not constitute any endorsement of them by the Lunar and Planetary Institute.

OBTAINING SPACE PHOTOGRAPHY

As a member of the system of Regional Planetary Image Facilities, the LPI Planetary Image Facility is designed to help you obtain planetary data products. Slide sets from the Voyager Jupiter and Pioneer Saturn missions are currently available for loan or purchase. A film containing a time lapse sequence from the Voyager missions as well as computer simulated flybys of Jupiter and Saturn is available for loan. Users with access to a computer terminal may search the Viking images using the Better Image Retrieval Program (BIRP) developed by Washington University and now available at the LPI. For further information about BIRP or for help in obtaining planetary photography or maps, please phone the LPI Planetary Image Facility (713/486-2172 or 2136) or contact the RPIF in your vicinity. (See page 8 this Bulletin for RPIF locations.)

SLIDE SET ORDER FORM

The following slide sets are now available for loan or purchase. If you wish to purchase slide sets, please make check payable to LPI and mail to the PHOTOLIBRARY. Please enclose payment with order.

	PRICE	# OF SETS TOTAL
Voyager I 57 slides & description Voyager II 42 slides & description Pioneer Saturn 32 slides & description	\$15.00 \$11.00 \$8.00	
TOTAL ENCLOSED:		
ADDRESS		

LUNAR AND PLANETARY BIBLIOGRAPHY

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PLANNING AHEA

1981 CALENDAR

March 11-14

Comets: Gases, Ices, Grains, and Plasma
Tucson AZ

March 16-20

TWELFTH LUNAR & PLANETARY SCIENCE CONFERENCE Houston TX

July 21-30

International Association of Seismology and Physics of the Earth's Interior (IASPEI)

General Assembly

London, Ontario, Canada

August 10-14

Fourth International Conference on Basement

Tectonics
Oslo, Norway

August 17-21

44th Annual Meeting of the Meteoritical Society

Bern, Switzerland

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CALENDAR

May 22-27	AGU Spring Meeting, Toronto Contact: AGU 2000 Florida Avenue NW Washington, DC 20009
June 13	Abstract Deadline for Geological Society of America Annual Meeting, Atlanta, Georgia Contact: GSA P.O. Box 9140 Boulder CO 80301
June 9-14	COSPAR Topical Meeting 'Observations of the Planets from Earth-Orbiting Vehicles' Budapest, Hungary. Contact: Dr. John Caldwell E.S.S. Dept. SUNY at Stony Brook Stony Brook NY 11794
June 15	Abstract deadline for Meteoritical Society meeting Contact: Ms. Paula Robertson LPI
June 18-30	NATO Advanced Studies Institute on Tephra Contact: Dr. R.S.J. Sparks Dept. of Mineralogy and Petrology University of Cambridge Cambridge CB2 3EW England
July 7-12	Astronomical Society of the Pacific Annual Meeting Contact: Summer Meeting ASP 1290 24th Avenue San Francisco CA 94122
August 1	Division for Planetary Sciences/AAS title deadline
August 15	Abstract deadline for DPS/AAS annual meeting Contact: Dr. Brad Smith University of Arizona Lunar and Planetary Lab. Tucson AZ 85721 (602/626-3734)

European Geophysical Society and August 21-29 European Seismological Commission Local Organizing Committee EGS-ESC Budapest '80 Contact: Geophysical Department Eotvos University H-1083 Budapest Kun Bela ter 2, Hungary September 2-6 Meteoritical Society Annual Meeting Contact: Dr. Kurt Marti B-017, Chemistry Dept. University of California, San Diego La Jolla CA 90293 (714/452-2939)September 8-12 IAU Colloquium on Reference Coordinate Systems for Earth Dynamics, Warsaw, Poland Dr. B. Kolaczek Contact: Space Research Centre Polish Academy of Sciences Bartycka 18 00-716 Warszawa Poland TELEX: 815670 Dr. E.M. Gaposchkin SAO 60 Garden Street Cambridge MA 02138 USA TELEX: 921428 Multi-Ring Basins: Formation and November 10-12 Evolution. Houston, TX, LPI Contact: Pamela Jones LPI 713/486-2150 November 17-20 Geological Society of America Annual Meeting, Atlanta, Georgia Contact: GSA

> P.O. Box 9140 Boulder, CO 80301

TABLE OF CONTENTS

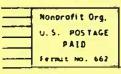
Caribbean Plate Steering Group	Page	1
McGetchin Memorial Fund		
Jupiter Data Analysis Program - NASA Notice		
LPI Workshops	Page	3
Change to PGPR Review System	Page	3
llth L&PSC Wrap-UP	Page	4
Meeting Announcements:		
Multi-Ring Basins		
Meteoritical Society		
DPS/AAS	Page	5
Tephra Studies - NATO		
Astronomical Society of the Pacific		
EGS/ESC	Page	6
LPI Summer Intern Program		7
Regional Planetary Image Facilities		8
New Publications		9
Obtaining Space Photography		12
Lunar & Planetary Bibliography		
Planning Ahead - 1981 Calendar		
Calendar	Page	22

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