

LUNAR AND PLANETARY



# INFORMATION BULLETIN

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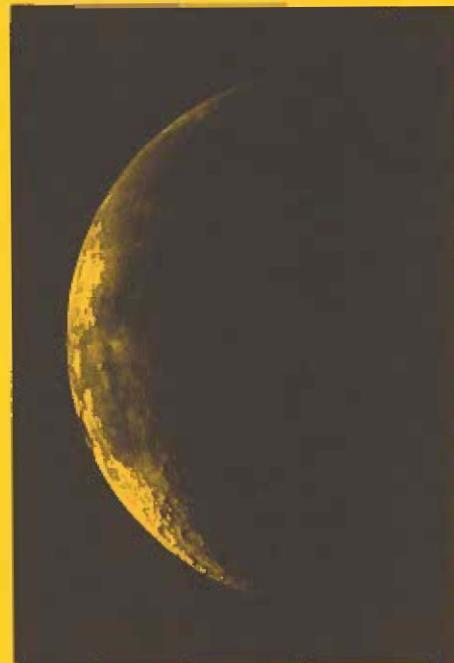
## Lunar and Planetary Science Conference XXII

**March 18-22, 1991**

The 22nd Lunar and Planetary Science Conference will open on Sunday, March 17, at 6:00 p.m. with registration and open house at the Lunar and Planetary Institute. The preregistration fee for the conference is \$50.00 for all attendees except students with valid student ID who may register for \$30.00. A late fee of \$10.00 will be assessed for all registrations received after March 1, including those received at the conference. Because of difficulties with currency exchange, registrants from foreign countries who preregister may request a waiver of the late fee and pay in cash on arrival at the conference; the preregistration form should be marked accordingly.

A shuttle bus will run between NASA area hotels and the LPI from 5:45 p.m. to 10 p.m. on Sunday. Registration will continue throughout the conference on the second floor of the Gilruth Center at Johnson Space Center. All conference activities, technical sessions, poster sessions, and exhibits, unless otherwise listed, will be held at the Gilruth Center.

Abstract submissions continue to increase. From the 791 abstracts accepted for publication in *Lunar and Planetary Science XXII*, the Program Committee has scheduled 36 technical



NASA PHOTO P-37298

*Galileo returned striking images of the Earth and Moon and generated new scientific data during its close encounter, December 8. See article, page 4.*

sessions. Additional meetings and special events are highlighted in the article on page 2 of this Bulletin.

**Monday Morning, March 18**

- Magellan at Venus
- Interstellar Grains

**Monday Afternoon, March 18**

- Venus Tectonics
- Chondrules and Chondrites
- Mars: Remote Sensing I
- Planetary Differentiation

**Tuesday Morning, March 19**

- Venus: Volcanism and Cratering
- Mars: Remote Sensing II
- Cosmic Dust I
- A: Basaltic Lunar Meteorites
- B: Lunar Resource Utilization

**Tuesday Afternoon, March 19**

- Moonviews: From Galileo, Apollo, and Earth
- Refractory Inclusions

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## Conference *continued from page 1*

- Cosmic Dust II and Comets
- SNC, Ureilites, and MAC88177

### **Wednesday Morning, March 20**

- Terrestrial Impact Structures
- Mars: Channels and Water
- Rocks: A to HED

### **Wednesday Afternoon, March 20**

- Mars Geology
- From Interstellar Grains to Asteroids: Joint Session of the Division for Planetary Sciences and the Meteoritical Society
- Terrestrial Impacts: Chemistry and Mineralogy
- Irons and Mesosiderites

### **Wednesday Evening, March 20**

- Venus, Earth, and Moon: New Views from Magellan and Galileo

### **Thursday Morning, March 21**

- Mars: Tectonics, Geophysics, Atmosphere, and Exploration
- Asteroids
- Solar Nebula Physics and Chemistry
- Lunar Highlands

### **Thursday Afternoon, March 21**

- Carbonaceous Chondrites
- Outer Solar System
- Impact Models and Experiments
- Lunar Mare Basalts

### **Friday Morning, March 22**

- Planetary Geological Processes
- Phobos
- A: Remote Sensing and Instrumentation
- B: N & S Isotopes
- Cosmic Rays and Solar Wind

The preliminary program included in this issue (see Appendix) reflects plans for the conference as of early February. Changes may occur before the conference itself.

## Conference Week: Meetings and Special Events

*As the Conference takes shape in late January, we take the opportunity to list some of the peripheral meetings and special events planned for the 22nd LPSC. Some of the details may change and new activities may be added between Bulletin press time and the Conference.*

### **Poster Sessions**

Posters will be displayed Monday through Thursday in the Gilruth Gym; each poster session will be held on the same day as the technical session with which it is associated. Poster authors will be available from 5:00–6:30 p.m. on the day of their session to discuss their presentation with other attendees; complimentary keg beer and soft drinks will be served during these discussion sessions.

### **Displays, Demos, and Exhibits**

The on-line and remote access capabilities of the interrelated database systems in use at the LPI will be displayed in the coffee area of the Gilruth Center during regular conference hours. These databases include the Geophysical Data Facility (GDF) developed and maintained by the LPI, as well as the Image Retrieval and Processing System (IRPS) sponsored by Washington University, which includes the Planetary Image and Cartography System (PICS) created by USGS Flagstaff. The LPI's Computing Center for Planetary Data Analysis (C<sup>2</sup>PDA) will demonstrate the image processing and scientific visualization capabilities of the Stardent Titan graphics supercomputer.

The Combined Publishers Exhibit will be on display in the coffee area at Gilruth Center, Monday through Friday.

Session Chairmen's Breakfast meetings will be held in the Club Room, Gilruth Center, 7:45–8:15 a.m., Monday through Friday.

### **Sunday — March 17**

A workshop on Mars Surface and Atmospheres Through Time (MSATT) will be held at LPI, Berkner Conference Room, from 8 a.m. to 4

p.m. Contact Ben Schuraytz at 713-486-2187 for information.

The Meteoritical Society Council will be held from noon to 10 p.m. in the Hess Room at the LPI.

### **Monday — March 18**

NASA Night is being organized on the topic "Science, Exploration, and the New NASA." A panel of senior NASA officials will discuss this theme at 8:00 p.m. in the Building 2 Auditorium, JSC.

### **Tuesday — March 19**

The popular Barbeque and Chili Cook-off returns this year, on the LPI grounds after sessions close for the day. Paid LPSC registrants are welcome; tickets for guests will be on sale at the registration desk. At least 20 teams are needed for the cook-off, so local and out-of-town teams are strongly encouraged to participate. Entry forms will be included in the third announcement of the conference. Contact: LPI Program Services, 713-486-2150.

### **Wednesday — March 20**

The JSC Astronomy seminar will present an update on the Soviet space station *Mir* by Jim Oberg in Room 193 of Building 31 at noon.

The Planetary Meetings Steering Committee will meet in the Blue Room at LPI from noon to 1 p.m.

A NASA Managers' Meeting will be held at 5:30 p.m. in the Gilruth Gym.

At 8:00 p.m. in the Building 2 Auditorium, a special session, "Venus, Earth, and Moon: New Views from Magellan and Galileo," will convene featuring Wes Huntress, director of NASA's Solar System Exploration Division, and several talks on the new images and data.

### **Thursday — March 21**

The Lunar and Planetary Science Conference Forum will be convened by the Planetary Meetings Steering Committee in Room 104, Gilruth, from noon until 1:15.

At 8:00 p.m. in the Gilruth Gym, interested scientists can participate in an informal keg session to discuss the Space Exploration Initiative.

## On-line 22nd LPSC Program

To access the on-line program, you may use either the NASA SPAN network or dial in direct. When using NASA/SPAN, the node name for the LPI VAX is **LPI::**. Direct dial phone lines are 713-486-8214 or 713-486-9782.

When connection is made, use the following directions:

**USERNAME:** Program

**PASSWORD:** LPI

You will then get the usual "welcome" to the system and a menu of options will be displayed.

### LPSC XXII BULLETIN BOARD

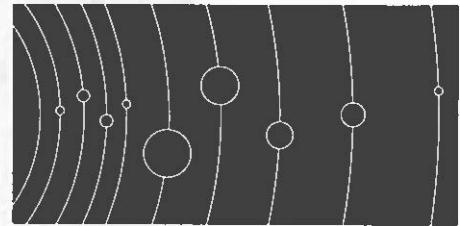
1. Browse the entire program.
2. Search by author/speaker name (lists an author's paper only).
3. Search by author/speaker name (lists full session in which the author appears).
4. Search by title keywords.
5. Browse by session.
6. Quit.

A series of menus and prompts will cue you to the appropriate way to access the various aspects of the program. **Note:** If you choose to browse the entire program, you must finish reviewing all the sessions for a particular day before the system will give you the exit prompt. We hope this innovative way of presenting the program to the community almost at the same time it is formed will assist you in planning your travel arrangements and other appointments that you may wish to make.

If you have any difficulty accessing the LPI computer, contact Kin Leung at 713-486-2165 (LPI::LEUNG on SPAN) or Lorraine Fisher at 713-486-2194 (LLFISHER on NASAMAIL).

# Proceedings of Lunar and Planetary Science, Volume 21

Graham Ryder and Virgil L. Sharpton, eds., Lunar and Planetary Institute, Houston, 738 pp. 1991. \$50.00



**P**roceedings of *Lunar and Planetary Science, Volume 21* is the latest in the series of volumes that began with the Apollo lunar landing 20 years ago. Most of the research articles and reviews presented are developments of papers presented at the 21st Lunar and Planetary Science Conference held in Houston, March 12-16, 1990, but in order to make the volume of even more general use to planetary researchers, additional articles have been included by the editors. The title change reflects this broadening of scope while retaining connection to the series.

In Volume 21 the editors have grouped the articles by topics: Geology and Geophysics of Venus; The Lunar Highlands: Construction and Destruction; The Lunar Regolith: Provenances and Solar Wind Interactions; Magmatic Processes of the Moon and Meteorites; Remote Sensing of the Moon, Mars, and Beyond; Chondrites, Cosmic Dust, and Comets; and Ammonia-Water Mixtures. In addition, a special section is devoted to papers that highlight the results of the NASA/LPI study project, "Mars: Evolution of Volcanism, Tectonics, and Volatiles" (MEVTV).

The LPI continues its commitment to publishing a high-quality book while keeping the cost as low as possible. This year, each registrant at the 22nd LPSC will receive a copy of *Proceedings of Lunar and Planetary Science, Volume 21*. An indispensable reference for scientists and students in planetary science, astronomy, geochemistry, petrology, and geology, the volume will be available to

librarians and others who wish to ensure the continuity of their collections from the Lunar and Planetary Institute for \$50.00 plus shipping and handling.

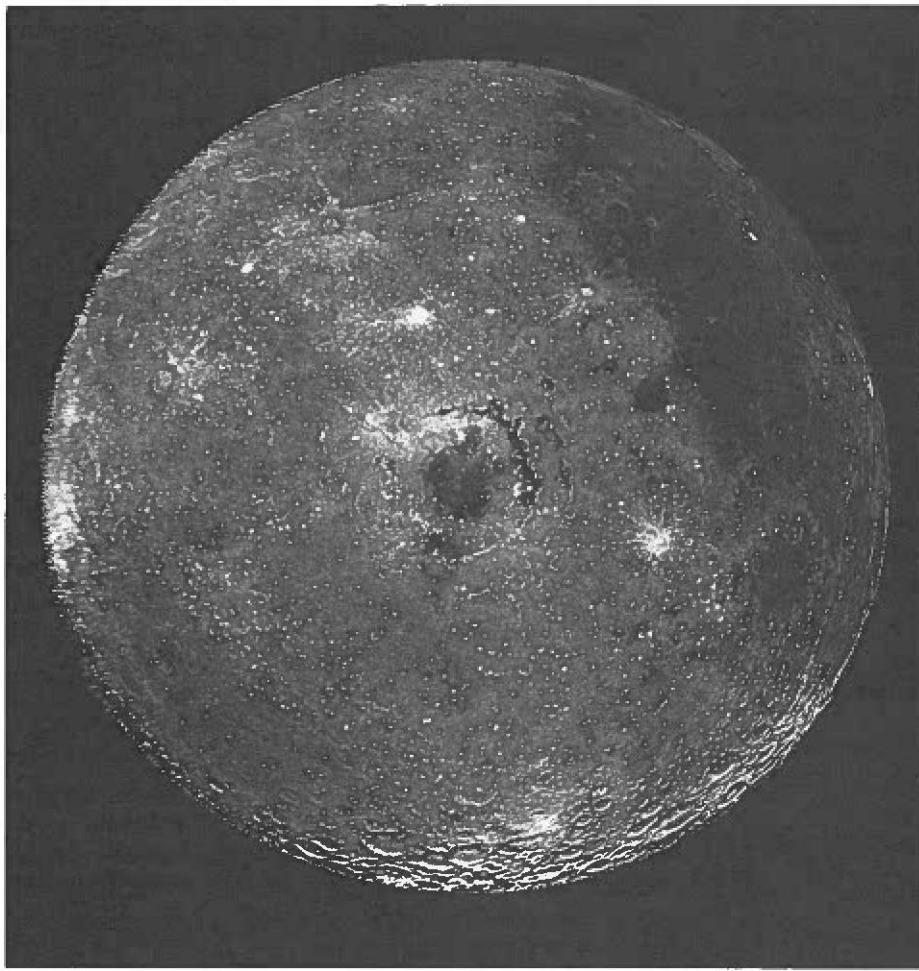
### Publication of Proceedings, Volume 22

**T**he *Proceedings of Lunar and Planetary Science, Volume 22*, will be published by the Lunar and Planetary Institute as a hardcover book. The deadline for submission of manuscripts to Volume 22 is May 10, 1991. Please contact LPI Publications Services at 713-486-2143 for more detailed information or inquire at the registration desk during the 22nd LPSC.

### Abstracts

**A** bound copy of *Lunar and Planetary Science XXII*, containing the abstracts accepted for presentation at the 22nd LPSC, will be distributed to each registrant at the conference. Because of budgetary constraints, no advance copies of abstracts will be sent to authors (foreign or domestic) before the meeting.

For those who cannot attend the conference but wish to have the abstracts, a supply will be available after the conference for the cost of shipping and handling. Refer to the order form included in this issue of the Bulletin.



NASA PHOTO P-37327

## New Images From Galileo Flyby

*Galileo made a number of Earth and Moon observations as it used Earth's gravity to sling it into a wider orbit around the sun on its way to Jupiter in 1995. Closest approach, on December 8, was 597 miles above the southwest Atlantic Ocean.*

The image above shows the western hemisphere of the Moon, taken December 9 at a range of about 350,000 miles. In the center is the Orientale Basin, 600 miles in diameter, formed about 3.8 billion years ago from the impact of an asteroid-sized body. Orientale's dark center is a small mare. To the right, on the lunar nearside, is the great, dark Oceanus Procellarum and below it, the small, circular Mare Humorum. The left side of the image shows the farside; the South-Pole-Aitken Basin, about 1200 miles in diameter, is at the lower left. It was likely formed by impact of a 100-mile-diameter object and resembles Orientale, except that it is older and much more battered by cratering. The cratered highlands of both sides are dotted with bright, young craters.

The image of the crescent Moon (page 1) was taken by the Galileo Solid State imaging system on December 8 and shows the western part of the lunar nearside. The smallest features visible are 5 miles in size. Major features are the dark plains of Mare Imbrium in the upper part of the image, the bright crater Copernicus (60 miles in diameter) in the center, and the heavily cratered lunar highlands at the bottom. The landing sites of the Apollo 12, 14, and 15 missions lie within the central part of the image. Samples returned from these sites will be used to calibrate this and accompanying images taken in different colors to extend our understanding of the spectral and compositional properties of the nearside of the Moon, seen from Earth, to the farside.

Digital image processing of the images was done by DLR, the German Aerospace Research Establishment, an international collaborator on the Galileo mission. Galileo will encounter the Earth for another slingshot maneuver in December 1992.

## SpaceArc: A Space Age Time Capsule

**M**illions of people will launch their personal thoughts, hopes, and other creative messages into outer space as part of SpaceArc, an innovative educational program developed by the Rochester Museum & Science Center. SpaceArc is a high-tech archive—or time capsule—that will be physically transported into space aboard a satellite.

When complete, SpaceArc will be composed of millions of optically scanned messages from people around the globe. Anyone who wants to put a message in this time capsule can complete a special, letter-sized Archival Form with room for the sender's name and photograph as well as space to express personal thoughts. To date, some 20,000 children and adults from the U.S. and other countries have completed Archival Forms with messages ranging from descriptions of home and families to essays on the state of our world to song lyrics, poems, and drawings.

SpaceArc is a not-for-profit educational project of the Rochester Museum & Science Center in Rochester, New York, in partnership with NASA (Division of Educational Affairs), Space Systems/Loral (formerly Ford Aerospace), Educational Testing Service, the World Space Foundation, and the U.S. International Space Year Association. In celebration of the International Space Year and the 500th anniversary of Christopher Columbus' voyage of discovery, SpaceArc will be launched in the autumn of 1992. The specially built container for the archive will travel aboard the American "space sail," a solar-powered spacecraft that will race similar European and Asian vessels to the Moon in the Columbus 500 Space Sail Cup. From the Moon, SpaceArc will travel to Mars and finally into solar orbit where it will remain for generations and perhaps be discovered by explorers in the future.

Duplicates of the archive will be available at selected computer centers at museums and science centers around the world to provide Earthbound access by participants and future generations. These Earth Station retrieval systems make SpaceArc fundamentally different from traditional time capsules as they provide educational and cultural benefits from continuing access to the archive after the 1992 launch.

A program for all ages, SpaceArc appeals particularly to school-aged children. A *Guide for Teachers* has been developed to help educators integrate the program into their curricula. It contains classroom suggestions, course-specific applications, a sample Archival Form, and some examples of messages already compiled. A processing fee of \$2.50 for each form covers handling costs and preparation for scanning and storage.

For more information and Archival Forms, contact:

Rochester Museum & Science Center  
657 East Avenue  
Box 1480  
Rochester NY 14603-1480  
Phone: 716-271-4320

## Landsat MSS Data 1972-1988 Available at Reduced Cost

**M**ore than 600,000 Landsat Multispectral Scanner (MSS) scenes dating from 1972-1988 are immediately available to environmental researchers and other users at the cost of reproduction, a substantial savings. Landsat MSS data more than two years old will now be distributed by the USGS through its Earth Resources Observation Systems (EROS) Data Center (EDC) in Sioux Falls, South Dakota, as well as by EOSAT Company, the private firm that was granted control over distribution of Landsat data in 1985.

The arrangement was made possible by a recent agreement between the National Oceanic and Atmospheric Administration (NOAA) and the Earth Observation Satellite Company (EOSAT). EOSAT retains exclusive sales rights to MSS data less than two years old and to all Landsat Thematic Mapper (TM) data until July 1994, when TM data more than 10 years old will become available from the EDC.

### Aids Global Change Studies

"One result of making the historic data more affordable is to facilitate research, including studies of long-term global change, for scientists on limited budgets," said USGS Director Dallas Peck. Peck is chairman of the Committee on Earth and Environmental Science (CEES) of the Federal Coordinating Council for Science, Engineering, and Technology. CEES is involved in planning and coordinating global change research activities.

"Landsat data provide a unique baseline of information about land conditions and changes during the 1970's and 1980's that is not available from any other existing data source and that could be critical in studies of global change." Peck continued, "The ability to detect changes in vegetation and land-surface parameters are intrinsically linked to efforts to assess the impacts of global climate change, both as an early indicator of climate change and as a contributor to changes in the chemical composition of the atmosphere."

"Making these data more easily accessible is very timely in light of today's critical need for affordable, worldwide, satellite remotely sensed data coverage required for critical environmental . . . and global change studies," he added.

EOSAT Executive Vice President Peter Norris said, "EOSAT is extremely pleased that Landsat data will be playing such a crucial role in environmental change research" and

*continued on page 6*

noted that the government's role will help EOSAT to broaden its customer base of Landsat users.

#### Lower Prices

The new prices for the historic MSS data are substantially lower than prices for data and images less than two years old. For example, a 9.5-inch black and white paper print of an older image sells for \$10 from the EDC, compared with \$95 for an image less than two years old from EOSAT.

Other EDC prices for standard MSS products at least two years old are \$12 for 9.5-inch BW positive film, \$18 for 9.5-inch BW negative film, \$250 for 9.5-inch color transparency, and \$200 for magnetic tape data.

For more information, contact:

Customer Services  
EROS Data Center  
Sioux Falls SD 57198  
Phone: 605-594-6151

MSFC, JPL, JSC, KSC, and ARC NASA centers) has struggled to provide the rapidly growing SPAN user community with communications and user services under a tightly constrained budget. These user services have included network security, network pass through accounts, computer gateways, the SPAN-Network Information Center, a help desk with SPAN specialists, extensive online and offline documentation, user groups, and many others. SPAN has been known for accomplishing a great deal with very few resources over its long history.

However, SPAN management has been completely unsuccessful in many other areas, such as upgrades in bandwidth to science institution tail circuits, bandwidth upgrades for NASA-center-to-NASA-center backbone circuits, and the purchase of new network routers to allow the

to SPAN, using different protocols and managed under different organizations. A single suite of communication protocols has emerged as an international standard. This suite is the Open Systems Interconnect (OSI). The U.S. federal government has mandated that all its agencies will transition their computer networks to a subset of OSI protocols as defined by the Government Open Systems Interconnect Profile (GOSIP). At the first retreat, it was decided that an overall goal for the Agency should be to eventually maintain and operate one network using the OSI protocol.

The transition plan worked out at the retreats will begin the process of consolidating appropriate network communications links that will facilitate the network protocol transitions to OSI (for both TCP/IP and DECnet). As soon as the completed plan has been signed, it will be published in a variety of places to inform the user community.

Because of this wider goal and management reorganization, current SPAN users will finally have the increased bandwidth they have desperately needed. With users' and upcoming NASA missions' heavy reliance on computer networks, major structuring changes are necessary.

The new network management team will be led by the ARC NASA Science Internet (NSI) team with the Advanced Data Flow Technology Office (ADFTO) at GSFC performing user support and network application development under ARC direction. In addition, within the next few years the SPAN "routing centers" management teams will be completely phased out with NSI performing all their functions from ARC.

Technically, this transition took place on December 15, 1990, when full user support activities at GSFC were moved under ADFTO, and the NSI Project Office became responsible for the management and operation of all DECnet services to the science user community.

## SPAN Disbands— Transition to Open Systems Interconnect

*The following article, by Jim Green, Director, NSSDC, and Dave Peters, SPAN Project Manager, is excerpted with permission from NSSDC News, Vol. 6, No. 3, Fall 1990.*

After 10 years of service to the NASA science user community, as of December 15, 1990, the NASA Space Physics and Analysis Network (SPAN) ceased to exist organizationally and functionally. The NASA science-oriented DECnet networking for which SPAN was responsible has been turned over to a new support group and, in most cases, new personnel. Also, plans have been made to significantly alter the physical architecture of the network sometime in 1991. This applies only to the NASA portion of SPAN (U.S.-SPAN) and will not affect the ESA-supported European SPAN (E-SPAN).

In the last several years, SPAN Management! (a confederation of network personnel at the GSFC,

*Every effort is being made to ensure that this transition is as transparent to the user as possible.*

migration to DECnet/Open Systems Interconnect (OSI) Phase V. This situation has caused SPAN's Management and user community a considerable amount of grief. In addition, NASA Headquarters has wanted ARC to take the lead role in all wide-area networking for both TCP/IP and DECnet, so that NSSDC could drop all wide-area networking responsibilities at GSFC and concentrate exclusively on data archiving problems and issues.

Starting in June 1990, a series of meetings called the NASA Network Management Retreats was held. Key NASA personnel met to discuss the future of NASA networking and any possible consolidation. NASA is currently operating several computer communications networks in addition

## Meetings



### **International Geology Meeting Planned in Toronto in May '91**

**G**eologists from around the world are expected to gather in Toronto, May 27-29, 1991, when the Geological Association of Canada and the Mineralogical Association of Canada hold a joint annual meeting with the Society of Economic Geologists.

A varied program is planned that will include lectures and poster sessions, field trips, and industry exhibits. Topics to be covered range from Precambrian sedimentation to the record of global change in modern sediments; from meteorites to submarine mineral resources; and from high-pressure studies in experimental petrology to geoscience and the arts.

Field trips will concentrate on the geology and mineral deposits of northern Ontario but will extend also into Quebec and as far afield as the West Indies. Locally there will be an opportunity to study the building stones and historic structures of downtown Toronto.

Further information about the meeting is available from:

**Jeff J. Fawcett, General Chairman  
Toronto 1991**

Department of Geology  
University of Toronto  
22 Russell Street  
Room 1066B

Toronto, Ontario, Canada M5S 3B1  
Phone: 416-978-6588  
FAX: 416-978-3938



### **Seventh National Space Symposium**

**S**ponsored by the National Space Foundation, the Seventh National Space Symposium will be held April 9-11, 1991, in Colorado Springs, Colorado. The conference will feature prominent civil, military, commercial, and international space policy decision makers. Participants will have a unique opportunity to address the challenges America faces in science, technology, education, exploration, and policy.

For information, contact:

Diana Nitschke  
U.S. Space Foundation  
P.O. Box 1838  
Colorado Springs CO 80901  
Phone: 719-550-1000



### **Conference on Comets and the Origins and Evolution of Life**

**A** conference on Comets and the Origins and Evolution of Life will be held September 30 to October 2, 1991, at the University of Wisconsin-Eau Claire, convened by Paul J. Thomas (UW-Eau Claire), Christopher P. McKay (NASA Ames), and Christopher F. Chyba (Cornell).

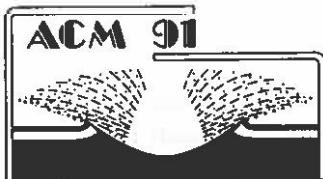
The purpose of the meeting is to consider the role of comets in the origins and evolution of life, particularly in light of new findings from recent investigations of Comet Halley and the study of IDPs, an improved understanding of organic synthesis in meteorites and comets, recent numerical simulations of cometary orbital evolution, and models of comet impacts on the Earth. The conveners hope that key concepts will be discussed and clarified in time for forthcoming cometary missions, and anticipate publication of a conference proceedings volume. The following topics will be included:

- Halley results: CHON particles, organics, POM; organic mantles and jets; C/O and N/O ratios
- IDPs and organic molecules
- Organic molecules and meteorites
- Models for impact delivery of volatiles and organics to the terrestrial planets
- Models of comet formation; possible Al-26 heating and liquid cores
- Comet showers and periodic extinctions
- Models of impact frustration of life
- New missions: CRAF and Rosetta

The conference is envisioned as a retreat; although phones and FAX machines will be available at the conference hotel, these facilities will be extremely limited at the conference center. This will allow ample time for in-depth discussions of issues arising from the sessions; poster contributions are especially encouraged.

For further information, contact:

**Paul J. Thomas  
Department of Physics and  
Astronomy  
University of Wisconsin  
Eau Claire WI 54702-4004  
Phone: 715-836-5046  
FAX: 715-836-2380**



## Asteroids, Comets, Meteors 1991

The international conference, Asteroids, Comets, Meteors 1991, will be held June 24–28 on the campus of Northern Arizona University, Flagstaff, Arizona. The meeting is intended to follow the tradition of three ACM meetings held in Uppsala, Sweden, in 1983, 1985, and 1989 and to set a pattern of alternating meetings in the U.S. and Europe. ACM 91 will cover all aspects of studies of asteroids, comets, meteors, and their interrelations, including discovery, astrometry, orbital dynamics, origin and evolution, physical observations, laboratory studies, and space missions. Conference proceedings similar to those of previous ACM meetings will be published by the Lunar and Planetary Institute.

Each morning, the organizers plan to hold plenary sessions consisting of invited reviews, 20–30 minutes long, and selected contributed papers of 10 minutes. Afternoon sessions will be various parallel activities: sessions with longer or more specialized talks, poster sessions, committee meetings, or informal roundtable discussions.

### Abstracts

The deadline for receipt of abstracts at the Lunar and Planetary Institute is April 19. Because of potential delays with overseas mail, abstracts from abroad will be accepted by e-mail, FAX, or TELEX. To submit electronically, set line length to 80 characters. Send abstract and information forms by e-mail using NASA/SPAN to LPI:TINDELL. FAX to 713-486-2162. TELEX to 7400832 LAPI UC. Contact the LPI Computer Center (Lorraine Fisher, 713-486-2194) if you have problems

submitting electronically. As a follow-up, hard copies should be sent as directed for regular submissions.

### Workshops and Meetings

A workshop entitled Strategies for Cometary Exploration is planned in conjunction with a meeting of the joint NASA/ESA committee studying a comet nucleus sample return mission. A special session is planned to highlight the Galileo encounter with the asteroid 951 Gaspra that will occur on October 29 and to document groundbased knowledge before the encounter. A workshop and committee meeting on the NASA Planetary Data System "Small Body Node" have been proposed, as has a workshop on present and future prospects for observing small solar system bodies with the Hubble Space Telescope.

### Events

A variety of trips and events are planned including a reception at the Lowell Observatory, a field trip to the Barringer Meteor Crater, and an excursion to the Grand Canyon.

Contact: Pam Jones

Program Services Department  
Lunar and Planetary Institute  
3303 NASA Road 1  
Houston TX 77058-4399  
Phone: 713-486-2150  
FAX: 713-486-2162

## International Conference on Near-Earth Asteroids

In association with a distinguished Organizing Committee, NASA, the Planetary Society, and other cosponsors will hold a conference on Near-Earth Asteroids June 30 to July 3, 1991, in San Juan Capistrano, California. Interest in this subject has been growing in the past year through discoveries of new NEAs, new physical observations, heightened interest in the hazard issue, potential NEA missions by several nations, and the possible role of NEAs in NASA's Space Exploration Initiative. Research continues on the connection of NEAs

to comets, meteorites, and the cratering history of the Earth-Moon system.

- Topical themes of this meeting are:
- The nature of NEAs (orbital/size distributions, physical properties, physical/dynamical evolution)
- The origins of NEAs (accretionary remnants, main belt fragments, decay of short-period comets)
- Relationship to meteorites (intermediate parent bodies, dust)
- Impacts of NEAs (hazards to civilization, Earth/Moon/Mars cratering, early Earth, environmental consequences/mass extinctions)
- Searches for NEAs (Palomar/international programs, prospective programs, Moon-based search)
- Utilization of NEAs (mining/utilization in space)
- Missions to NEAs (prospective missions by Japan, Italy, USA, USSR; SEI way stations en route to Mars; mitigation of impact hazard)

For further information, contact:

Dr. Clark Chapman  
Planetary Science Institute/SAIC  
2421 E. 6th Street  
Tucson AZ 85719  
Phone: 602-881-0332  
FAX: 602-881-0335  
E-mail:  
[cchapman%nasamail@ames.arc.nasa.gov](mailto:cchapman%nasamail@ames.arc.nasa.gov)

## Eighth Thematic Conference: Geologic Remote Sensing Exploration, Engineering, and Environment

The Eighth Thematic Conference will be held in Denver, Colorado, April 29 to May 2, 1991. It is the latest in a continuing series of international conferences and will focus primarily on geologic remote sensing, with special emphasis on mineral and hydrocarbon exploration, engineering, and environmental applications. The program is designed to benefit both small independent operators and large corporate users of remote sensing; it will be composed of more than 300 technical presentations by experts from 29 countries. To provide an

effective learning experience for all attendees, the program treats all aspects of geological interpretation. Specific topics will include:

- U.S. hydrocarbon exploration
- Remote sensing for marine and environmental applications
- Engineering geology and hydrology
- Geobotanical remote sensing
- Spectral geology
- Mineral exploration
- International hydrocarbon exploration
- Radar and thermal infrared remote sensing
- Image processing and analysis
- Data integration and geographic information systems

The conference will also include hands-on workshops, field trips, an exhibition of commercial products and services, student and employment referral programs, and an exciting optional schedule of tours and social activities for conference attendees and their companions.

For information, contact:

Nancy Wallman  
ERIM Thematic Conferences  
P.O. Box 8618  
Ann Arbor MI 48107-8618  
Phone: 313-994-1200, ext. 3234  
FAX: 313-994-5123

## Gordon Conference on Origins of the Solar System

**A** Gordon Conference on Origins of the Solar System will be held July 8-12, 1991, at Colby-Sawyer College (S), in New London, New Hampshire. The multidisciplinary program will range from problems of star formation to problems of planetary formation and prebiological evolution. Those interested may contact:

Dr. A. G. W. Cameron  
Harvard College Observatory  
60 Garden Street  
Cambridge MA 02138  
Phone: 617-495-5374



## 54th Annual Meeting of the Meteoritical Society

**T**he Meteoritical Society will hold its 54th Annual Meeting July 21-26, 1991, in Monterey, California. General and topical sessions will deal with new results from meteorite, lunar, and planetary research. Invited speakers will focus their contributions on issues that lie at the interface of astronomy/astrophysics and the Society's wide field of interest.

### Abstracts and Student Grants

Abstracts of presentations must be received at the Lunar and Planetary Institute by May 20, 1991. A number of student travel grants will be available for student members (including recent Ph.D.s) of the Meteoritical Society. These grants are to encourage those who cannot otherwise get support to participate in this meeting. To apply, students should submit a two-page abstract (in addition to the normal abstract) of a paper to be presented at the meeting; the student must be the sole or first author. In addition, a brief resume of relevant training and meteoritic or other research activities should be included. Student abstracts must be received at the LPI by May 6, 1991. Applicants will be notified of the decision by early June.

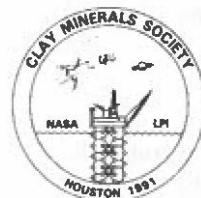
### Field Trips and Activities

Pre- and postconference field trips are in the planning stage and may include portions of the San Andreas transform system, Cenozoic stratigraphy and granite basement, or possibly the Ventura Basin, one of the most tectonically active areas on Earth. The Annual Dinner will be on

Thursday, the 25th, at the Monterey Bay Aquarium. A variety of additional social and cultural attractions will be available near the conference site.

For further information, contact:

Pam Jones  
Program Services Department  
Lunar and Planetary Institute  
3303 NASA Road 1  
Houston TX 77058-4399  
Phone: 713-486-2150  
FAX: 713-486-2160



## Clay Minerals Society

### 28th Annual Meeting

**T**he Clay Minerals Society, along with NASA and the Lunar and Planetary Institute, will convene its 28th Annual Meeting in Houston, Texas, October 5-10, 1991. Symposia session titles include Clay Geothermometers and Geochronometers; Extraterrestrial and Impact Phyllosilicates; Soils and Clays in Environmental Research; and Surface Chemistry of Clays. Papers on additional topics will be given in general sessions and use of posters in all sessions will be increased this year.

Attendees will have opportunities to visit NASA facilities and collections and will hear a special evening presentation on planetary science.

A Mössbauer Spectroscopy Workshop will be held on Saturday, October 5, and a mid-meeting field trip will be offered on the 9th.

For further information, contact:

D. R. Pevear  
Exxon Production Res.  
P.O. Box 2189  
Houston TX 77001  
Phone: 713-529-8909

## Publications

**These publications are available from the publisher listed  
or may be ordered through local bookstores**

### **Lunar Sourcebook**

Grant H. Heiken, David T. Vaniman,  
and Bevan M. French, eds.  
Cambridge University Press  
(in association with  
the Lunar and Planetary Institute)  
New York, 736 pp.  
Available March 1991  
Hardcover \$59.50

**L**unar *Sourcebook*, a concisely presented collection of data gathered during American and Soviet missions, is an accessible and complete one-volume reference encyclopedia of current scientific and technical information about the Moon. The book provides a thorough introduction to lunar studies as new concepts evolve from exploration and sample analysis and an up-to-date description of current knowledge of the lunar environment. Formation and evolution of the lunar surface by a number of processes is examined, and detailed characterization of lunar minerals, rocks, and soils is given in chapters on each. Thorough chapters on chemistry and physical properties will be of special interest to those who plan for future lunar exploration. A chapter on global and regional data uses imagery and other data sources to examine what we know on a larger scale, and the book concludes with an afterword that, among other things, outlines the interesting, unanswered questions about the Moon.

The book is written and edited by scientists active in every field of lunar research, all of whom are veterans of the Apollo program. The contributors are from universities, national laboratories, NASA, and industry. Apollo astronaut and geologist Jack Schmitt provides the foreword.



NASA PHOTO AS15-82-11160

The book will be an essential reference for engineers, mission planners, planetary scientists, educators, and students interested in up-to-date scientific study and exploration of the Moon.

Order from:

Cambridge University Press  
40 West 20th Street  
New York NY 10011

*Lunar Sourcebook* will be for sale at the 22nd LPSC, Monday through Friday at the Publishers Exhibit in the coffee area.

### **The Nature & Origin of Cordilleran Magmatism**

J. Lawford Anderson, ed.  
GSA Memoirs  
Boulder, 440 pp. 1990  
Hardcover \$65.00  
ISBN 0-8137-1174-6

**T**he *Nature & Origin of Cordilleran Magmatism*, edited by J. Lawford Anderson, has been published as part of the GSA Memoirs series. The volume is a set of papers that examine the remarkable compositional span of igneous activities characterizing the orogen. The papers represent research into specific areas of the orogen and emphasize magma genesis (including the role of multiple source control and changes in magmatic trends caused by fractional crystallization), assimilative fractional crystallization, and mixing. They present an abundance of new data and exciting interpretations of the Mesozoic and Tertiary igneous suites of the Cordillera from Baja to Alaska, including work in the Peninsular Ranges batholith, Transverse Ranges, Mojave Desert and Lake Mead regions, Sierra Nevada batholith, Salinian magmatic arc, Great Basin, Klamath Mountains, Idaho batholith, Colville igneous complex, and Coast batholith.

GSA Publication Sales  
P.O. Box 9140  
Boulder CO 80301

## AGI Will Update Bureau of Mines Classic Dictionary of Mining and Mineral Terms

The Bureau of Mines has awarded a contract to the American Geophysical Institute to produce a second, updated edition of its *Dictionary of Mining, Mineral, and Related Terms* published in 1968. The first, 1269-page edition contains 55,000 terms and 150,000 definitions, the most comprehensive dictionary of mining and mineral terms known.

The dictionary will be converted to a machine-readable database and the AGI staff will work with the Bureau's Dictionary Revision Group to enlist expert subject specialists who will propose terms to add, as well as update and verify definitions. The revision will take three to four years.

Up to 25% of the new terms may come from AGI's *Glossary of Geology*, published in 1987. AGI was chosen to produce the revised edition based on its expertise in publishing geoscience dictionaries, thesauri, and bibliographies. It uses state-of-the-art database production software as well as the 1.5-million-citation GeoRef database. AGI is a nonprofit federation of 10 member organizations that represent geologists, geophysicists, and other earth scientists.

## Top Soviet Space Scientists to Publish Through SSI

The Space Studies Institute of Princeton, New Jersey has signed agreements to publish the works of top-ranking scientists in the Soviet space program. This informative technical literature is now available from SSI.

Deputy chief designer of the Energia heavy lift launch vehicle, Vjacheslav M. Filin, addresses the environmental threat posed by a growing world space

transportation fleet in *Ecology Problems of the Rocket Space Technology*. In *Rocket-Space Technology Safety* he summarizes systems and the philosophy for safety in Soviet manned launch vehicles.

Boris Ivanovich Gubanov, chief designer of the Energia, describes the overall design of a fully reusable, next-generation Energia in *The Immediate Prospect of the Reusable Space Transport Systems*, and discusses engine capabilities as well as different core block and stage configurations of the Energia in *The Space Vehicle for Today and Tomorrow*.

Vladimir S. Syromiatnikov, chief and professor of the electromechanical engineering branch for large deployable space structures, has contributed to the publications. *Space Craft Docking Devices* examines the theory and technique of docking spacecraft, with analyses of various U.S. and U.S.S.R. designs. *Manned Spacecraft* describes the structure, basic systems, and equipment of many U.S. and U.S.S.R. manned craft, from the earliest Vostoks to today's improved vehicles.

For more information, contact:

Chris Faranetta  
Space Studies Institute  
P.O. Box 82  
Princeton NJ 08542  
Phone: 609-921-0377  
FAX: 609-921-0389

## LGI Reports Available

The Lunar Geotechnical Institute announces publication of the first two volumes in its technical report series. They are:

1. *Particle Shapes of Three Lunar Soil Samples*, by A. Mahmood, J. K. Mitchell, and W. D. Carrier III. TR90-01.

2. *Geotechnical Engineering on the Moon*, by J. K. Mitchell and W. D. Carrier III. TR90-02.

The reports are available free of charge from the LGI.

Lunar Geotechnical Institute  
P.O. Box 5056  
Lakeland FL 33807-5056

## New Slide Sets

### Mapping the Planets

A new slide set, *Mapping the Planets*, is available from the Canadian Cartographic Association. In 40 slides and an explanatory booklet, it gives an overview of the history and current status of efforts to map the Moon and planets. The booklet contains background information on astronomy and space exploration and a set of captions for the slides. The emphasis is on relatively recent cartographic work, undertaken in support of the solar system exploration programs of the United States and the Soviet Union. A few maps drawn before the Space Age are included to give historical perspective. Information on obtaining copies of the maps themselves is included. The set was prepared by Philip Stooke of the University of Western Ontario and Peter Keller of the University of Victoria. Each set costs \$50.00 in Canadian dollars, shipping included. The set may be ordered from:

Roger Wheate (CCA)  
Geography Department  
University of Calgary, Alberta  
Canada T2N 1N4  
Phone: 403-220-4892  
FAX: 403-282-7298  
BITNET: wheate@uncamult



## Light Pollution: Problems and Solutions

A comprehensive slide and information set, *Light Pollution: Problems and Solutions*, is now available from the Astronomical Society of the Pacific. The set, produced in cooperation with the International Dark-Sky Association, is designed to help explain the ecological issues of "waste light"—illumination that spills into the sky without helping us see better or be more secure, yet hinders astronomers from getting a good view of the universe.

The set of 20 color slides illustrates the growth of light pollution around the world with satellite images of the Earth and the U.S. at night, and with images of the Los Angeles basin taken in 1908 and 1988. The set also contains photos of ineffective, expensive lighting fixtures, as well as much more efficient designs available and in use today, and documents the cost savings achieved by cities that have switched to the improved designs. Several images demonstrate that more efficient lighting can also increase security. In addition, the set includes simple, clear illustrations of the extent to which light pollution is detrimental to astronomy.

The slides are accompanied by an extensive booklet of nontechnical background information, detailed captions, and a reading list on the issue. The set is available for \$24.95 (which includes postage and handling). California residents must include sales tax. Outside the U.S., please add \$3.00 extra postage and remit in U.S. funds. Order from:

Astronomical Society of the Pacific  
Light Pollution Slide Orders  
390 Ashton Avenue  
San Francisco CA 94112

## New ESA-IRS Database

The European Space Agency's Information Retrieval Service has added another on-line databank to its aerospace sector: Spaceflight Data. The file contains data on launched unmanned space vehicles or bodies from 1982 through planned launches in the year 2020 and is divided into three subgroups: Unmanned Launch Vehicles, Unmanned Spacecraft, and Bodies in Terrestrial Orbit (space debris).

The data in this textual-numeric databank provides information of spacecraft/vehicle identification, mission, configuration, payload, propulsion, manufacturer, orbital data, users, and more. It is a useful addition to existing ESA-IRS files such as the European Aerospace Database, NASA, Aerospace Daily, Space Patents, Spacecraft, Molars (Meteo), NATO-PCO, and many other multidisciplinary databases.

ESA-IRS is a service of the European Space Agency that provides access to over 120 scientific/technical bibliographic databases and to a large number of factual databanks in the fields of management. It is based at ESRIN, Frascati, Italy.

For further information, contact:

Evelyn Loeffler-Stegen  
ESRIN Public Relations  
Via Galileo Galilei  
00044 Frascati, Italy  
Phone: 39-6-941.801  
FAX: 39-6-9418.0361

## Minor Planet Index to Scientific Papers

The Minor Planet Index to Scientific Papers is a database containing more than 11,650 citations to asteroid and asteroid-related publications from 1789 to 1991. It is available on IBM-compatible floppy disk and as a bound, laser-printed document. It includes virtually every paper and magazine article published on the minor planets in the twentieth

century along with several hundred nineteenth-century citations. The index is updated weekly, ensuring the most current list available at the time of purchase. Each entry contains the following data: Name of journal, book, magazine, or newspaper; title of paper, article, or dissertation; author(s); date; volume number or circular number; page number.

The Index has a wide scope. In addition to papers that deal specifically with asteroids, related topics, including comets, meteorites, and extinction theory, are included. All doctoral theses, books, and magazine articles are included, as well as the New York Times and Times of London database. According to its author, Clifford Cunningham, the Index is far more comprehensive than *Astronomy & Astrophysics Abstracts*.

Order forms for the Index are available from the author. With the use of a database management program, purchasers can search or sort the database on any field or combination of fields. Since it exceeds two megabytes, it is compressed onto one 1.2-MB IBM-compatible, 5.25-inch floppy. Also available is a bound, laser-printed edition that is sorted three ways: alphabetically by author, alphabetically by journal, and chronologically. The bound version is \$100 U.S.; the floppy version is \$40.00 U.S.

For information, contact:

Clifford Cunningham  
Dance Hill Observatory  
250 Frederick St., Apt. 1707  
Kitchener, Ontario  
Canada N2H 2N

After June 1, 1991:

Lowell Observatory  
1400 W. Mars Hill Road  
Flagstaff AZ 86002

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	B-Origins	ORIGIN OF THE MOON	\$25.00	_____
	B-Bases	LUNAR BASES AND SPACE ACTIVITIES OF THE 21ST CENTURY	\$20.00	_____
	B-Plans	PLANETARY SCIENCE: A LUNAR PERSPECTIVE	\$30.00	_____
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## Calendar

### March

- 13-15** Humans and Machines in Space: 29th AAS Goddard Memorial Symposium, Washington, DC. Contact: American Astronautical Society, 6352 Rolling Mill Place, Suite 102, Springfield VA 22152. Phone: 703-866-0020; FAX: 703-866-3526.
- 18-22** 22nd Lunar and Planetary Science Conference, Houston, Texas. Contact: Program Services Department, LPI, 3303 NASA Road 1, Houston TX 77058-4399. Phone: 713-486-2166; FAX: 713-486-2162.
- 24-28** EUG VI, Biennial Meeting of the European Union of Geosciences, Strasbourg. Contact: EUG VI Organizing Committee Secretariat, via S. Nicolo 14, 34121 Trieste Italy. Phone: (39) 40-368752; FAX: (39) 40-368808.

### April

- 9-11** Seventh National Space Symposium of the United States Space Foundation, Colorado Springs Colorado. Contact: Diana Nitschke, P. O. Box 1838, Colorado Springs CO 80901. Phone: 719-550-1000.
- 10-12** Second International Symposium on Power from Space, Paris, France. Contact: SPS 91, Societie des Electriciens et des Electroniciens, 48 rue de la Procession, 75724 Paris Cedex 15, France. Phone: 33 1 45 67 07 70; FAX: 33 1 40 65 92 29.
- 20** Astronomy Day. Contact: Gary Tomlinson, Astronomy Day Headquarters, Astronomical League, Chaffee Planetarium, 54 Jefferson SE, Grand Rapids MI 49053. Phone: 616-456-3987.
- 29-May 2** Eighth Thematic Conference Geologic Remote Sensing, Exploration, Engineering, and Environment, Denver, Colorado. Contact: ERIM/Thematic Conference P.O. Box 8618, Ann Arbor MI 48107-8618. Phone: 313-994-1200, Ext. 3234; FAX: 313-994-5123.

### May

- 22-27** Space: A Call for Action; 10th Annual International Space Development Conference, San Antonio, Texas. Contact: Carol Luckhardt Redfield, Southwest Research Institute, 6220 Culebra Road, San Antonio TX 78228-0510. Phone: 512-522-3823 or 679-7625.

**27-29**

Joint Annual Meeting of Geological Association of Canada, Mineralogical Association of Canada, and Society of Economic Geologists, Toronto, Canada. Contact: Jeff J. Fawcett, Department of Geology, University of Toronto, 22 Russell Street, Room 1066B, Toronto, Ontario, Canada M5S 3B1. Phone: 416-978-6588; FAX: 416-978-3938.

**28-June 1**

American Geophysical Union, Spring Meeting, Baltimore, Maryland. Contact: AGU, 2000 Florida Avenue N.W., Washington DC 20009. Phone: 202-462-6900.

**June**

**10-August 16**

LPI Summer Intern Program. Contact: Lebecca Simmons, Summer Intern Program, Program Services Department, LPI, 3303 NASA Road 1, Houston TX 77058-4399. Phone: 713-486-2166.

**21-27**

103rd Annual Astronomical Society of the Pacific Meeting, University of Wyoming, Laramie, Wyoming. Contact: Wyoming Meeting Info, A.S.P., 390 Ashton Avenue, San Francisco CA 94112. Phone: 415-337-1100.

**24-28**

Asteroids, Comets, Meteors 1991, Flagstaff, Arizona. Contact: Pam Jones, ACM 91, Program Services Department, LPI, 3303 NASA Road 1, Houston TX 77058-4399. Phone: 713-486-2150; FAX: 713-486-2162.

**30-July 3**

International Conference on Near-Earth Asteroids, San Juan Capistrano, California. Contact: Dr. Clark R. Chapman, Chairman, NEA Conference, Planetary Science Institute, 2421 E. 6th Street, Tucson AZ 85719.

**July**

**1-5**

Workshop on Hypervelocity Impacts in Space, Canterbury, United Kingdom. Contact: Professor J. A. M. McDonnell, Unit for Space Sciences, University of Kent at Canterbury, Kent CT2 7NR, UK. Phone: 44-227-459616.; FAX: 44-227-762616.

**8-12**

Gordon Conference on Origins of the Solar System, Colby-Sawyer College (S), New London, New Hampshire. Contact: Dr. A. G. W. Cameron, Harvard College Observatory, 60 Garden Street, Cambridge MA 02138. Phone: 617-495-5374.

**11**

Total eclipse of the sun visible from Hawaii and Mexico.

**Calendar** *continued from page 15*

- 21-26** **54th Meteoritical Society Meeting,** Monterrey, California. Contact: Pam Jones, Program Services Department, LPI, 3303 NASA Road 1, Houston TX 77058-4399. Phone: 713-486-2150; FAX: 713-486-2160.
- 23-August 1** **International Astronomical Union XXI General Assembly, Buenos Aires, Argentina.** Contact: IAU Secretariat 98bis, bd Arago, 75014 Paris, France.
- 
- August**
- 5-6** **Stellar Populations of Galaxies, IAU Symposium No. 149,** Angra dos Reis, Brazil. Contact: Dr. B. Barbuy, Dept. de Astronomia, Instituto Astronomico e Geofisico/USP, Caixa Postal 30627, Sao Paulo 01051 Brazil.
- 
- September**
- 30-October 2** **Comets and the Origins and Evolution of Life,** University of Wisconsin-Eau Claire. Contact: Paul J. Thomas, Department of

Physics and Astronomy, University of Wisconsin, Eau Claire WI 54702-4004. Phone: 715-836-5046; FAX: 715-836-2380.

**October**

- 5-10** **Twenty-eighth Annual Meeting of Clay Minerals Society, Houston, Texas.** Contact: D. R. Pevear, Exxon Production Res., P. O. Box 2189, Houston TX 77001. Phone: 713-529-8909.
- 21-24** **Geological Society of America Annual Meeting, San Diego, California.** Contact: R. Gordon Gastil, Department of Geological Sciences, San Diego State University, San Diego CA 92182.

**November**

- 4-8** **23rd Annual Meeting of the Division for Planetary Sciences of the American Astronomical Society, Palo Alto, California.** Contact: Christopher P. McKay, Space Sciences Division, NASA Ames Research Center, Moffett Field CA 94035. Phone: 415-694-5499.

The **LUNAR AND PLANETARY INFORMATION BULLETIN** is published three times a year by the Lunar and Planetary Institute, 3303 NASA Road 1, Houston TX 77058-4399.

Fran Waranis, *Editor*

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Send articles or announcements to:

F. Waranis, ed.  
3303 NASA Road 1  
Houston TX 77058-4399  
Phone: (713) 486-2135  
FAX: (713) 486-2162  
E-MAIL: SPAN LPI::FRAN

*This image of Earth was taken by Galileo on December 11, 1990, when the spacecraft was about 1.3 million miles from Earth. South America (center) and the sunlit, white continent of Antarctica (below) are visible through the cloud patterns. This image is the first frame of the Galileo Earth spin movie, a 500-frame, time-lapse motion picture showing a 25-hour period of Earth's rotation and atmospheric dynamics.*



NASA PHOTO P-37330



## **Twenty-Second Lunar and Planetary Science Conference**

**Preliminary Program  
March 18-22**

July

Brown Dog  
Spartakovets  
Minsk June 23

Method of training  
Dog Guard

**PRELIMINARY CONFERENCE PROGRAM**  
**22nd Lunar and Planetary Science Conference**  
**March 18-22, 1991**

\* Designates Speaker

{ Combined Presentation

**Monday, March 18, 1991**  
**MAGELLAN AT VENUS**  
**8:30 a.m. Room 104**

**Chairmen:**    **G. H. Pettengill**  
                     **W. M. Kaula**

Saunders R. S.\* Arvidson R. Head J. W. Schaber G. G. Solomon S. C. Stofan E. R. Basilevsky A. T. Guest J. E. McGill G. E. Moore H. J.

*Magellan: Preliminary Description of Venus Surface Geologic Units*

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*Venus Tectonics: The Perspective from Magellan at the Half-way Point*

Phillips R. J.\* Arvidson R. E. Boyce J. M. Campbell D. B. Guest J. E. Schaber G. G. Soderblom L. A.  
*Venus Impact Craters: Implications for Atmospheric and Resurfacing Processes from Magellan Observations*

Schaber G. G.\* Grimm R. E. Herrick R. R. Phillips R. J. Basilevsky A. T. Guest J. E. Ravine M. A. Schenk P.  
*The Geology and Distribution of Impact Craters on Venus: Initial Magellan Results*

Arvidson R. E.\* Baker V. R. Elachi C. Saunders R. S. Wood J. A.  
*Magellan: Overview of Venus Surface Modification*

Ford P. G.\* Liu F. Pettengill G. H.  
*High Resolution Magellan Topography*

Davies M. E.\* Colvin T. R. Rogers P. G.  
*Preliminary Magellan Results: The Venus Spin Vector and Control Network*

**Monday, March 18, 1991**  
**INTERSTELLAR GRAINS**  
**8:30 a.m. GYM**

**Chairmen:**    **I. D. Hutcheon**  
                     **E. Zinner**

Amari S.\* Zinner E. Lewis R. S.

*The C, N, Al, and Si Isotopic Compositions of SiC Grain Size Separates from Murchison: Indirect Evidence for Highly Anomalous Grains*

Alexander C. M. O'D. Prombo C. A. Swan P. D. Walker R. M.  
*SiC and Si<sub>3</sub>N<sub>4</sub> in Qingzhen (EH3)*

Stone J. Hutcheon I. D. Epstein S. Wasserburg G. J.  
*Si, C and N Isotopes in SiC from Orgueil and Murchison: H- and He-Burning Components in Presolar Grains*

Lewis R. S.\* Huss G. R. Lugmair G.  
*Finally, Ba & Sr Accompanying Xe-HL in Diamonds from Allende*

Zinner E.\* Amari S. Lewis R. S.  
*S-Process Ba and Nd in Presolar Murchison SiC*

Ireland T. R.\* Zinner E. K. Amari S.  
*Ti Isotopic Compositions of Murchison SiC*

Clayton D. D.\* Obradovic M. Guba S. Brown L. E.  
*Silicon and Titanium Isotopes in SiC from AGB Stars*

Verchovsky A. B.\* Fisenko A. V. Semjonova L. F. Shukolyukov Yu. A. Ott U. Begemann F.  
*Multicomponent Noble Gas Structure in Diamond-Rich Acid Residues from Efremovka CV3 Carbonaceous Chondrite*

Huss G. R.\* Lewis R. S.  
*Noble Gas Characteristics of Interstellar Diamonds as a Function of Meteorite Class and Thermal History*

de Vries M. S. Wendt H. R. Hunziker H. Peterson E. Chang S.\*  
*Search for High Molecular Weight Polycyclic Aromatic Hydrocarbons and Fullerenes in Carbonaceous Meteorites*

Gilmour I.\* Russell S. S. Newton J. Pillinger C. T. Arden J. W. Dennis T. J. Hare J. P. Kroto H. W. Taylor R. Walton D. R. M.  
*A Search for the Presence of C<sub>60</sub> as an Interstellar Grain in Meteorites*

Heymann D.\*  
*The Geochemistry of Buckminsterfullerene (C<sub>60</sub>) I: Solid Solutions with Sulfur and Oxidation with Perchloric Acid*

Russell S. S.\* Arden J. W. Pillinger C. T.  
*Not All Diamond from Chondritic Meteorites is Identical!*

#### POSTER PRESENTATIONS

Ash R. D. Russell S. S. Wright I. P. Pillinger C. T. Arden J. W.  
*Minor High Temperature Carbon Components Confirmed in Carbonaceous Chondrites by Stepped Combustion Using a New Sensitive Static Mass Spectrometer*

Monday, March 18, 1991  
 VENUS TECTONICS  
 1:30 p.m. Room 104

Chairmen: G. E. McGill  
 E. R. Stofan

Stofan E. R.\* Sharpton V. L. Schubert G. Bindschadler D. L. Janes D. M. Squyres S. W. Cushing J. A.  
*Origin and Evolution of Coronae on Venus: An Overview from Magellan*

Bindschadler D. L.\* Janes D. M. Schubert G. Sharpton V. L. Squyres S. W. Stofan E. R.  
*Models for Coronae: Deformation Due to Mantle Upwelling*

Grimm R. E.\* Phillips R. J.  
*Hot-Spot Tectonics of Eistla Regio, Venus: Results from Magellan Images and Pioneer Venus Gravity*

Olson P. L.\*

*Are the Equatorial Highlands on Venus Produced by Mantle Diaps?*

Johnson C. L.\* Sandwell D. T.

*Residual Thermal Stress: A Mechanism for Joints in Venusian Lava Flows*

Sammis C. G.\* Banerdt W. B.

*Self-Organized Critical Faulting on Venus*

Squyres S. W.\* Frank S. L. McGill G. E. McKenzie D. Parsons B. E. Solomon S. C.

*Tectonic Evolution of Lavinia Planitia, Venus*

Kaula W. M.\* Bindschadler D. L. Grimm R. E. Smrekar S. E. Roberts K. M.

*Styles of Deformation in Ishtar Terra and Their Implications*

Namiki N.\* Solomon S. C.

*An Assessment of the Crustal Remelting Hypothesis for Volcanism in the Freyja Montes Deformation Zone*

Lenardic A.\* Kaula W. M. Bindschadler D. L.

*A Finite Element Model of Crustal Deformation on Venus*

Keifer W. S.\*

*Mantle Viscosity and Flow Geometry: Implications for Surface Motions on Venus*

Leitch A. M.\* Yuen D. A.

*Patterns of Mantle Convection on Venus*

Herrick D. L.\* Parmentier E. M.

*Initiation of Subduction on Earth and Venus by Episodic Large-scale Mantle Overturn*

## POSTER PRESENTATIONS

Ansan V. Masson Ph. Sotin C.

*Tectonic Analysis of Meshkennet Regio of Venus from Venera 15 and 16 Data*

deCharon A. V. Bindschadler D. L. Beratan K. K. Head J. W.

*Geology of Alpha Regio, Venus from Magellan Data*

Frank S. L. Squyres S. W.

*Ridge Belts in Lavinia Planitia, Venus; Description and Sequence of Events*

Grosfils E. B. Head J. W.

*Relationship of Volcanism and Fracture Patterns in a Volcano-Tectonic Structure West of Alpha Regio*

Head J. W. Senske D. A. Schaber G. G.

*The Geology of Western Eistla Regio, Venus: Analysis of Magellan Radar Data*

Malin M. C.

*Hillslope Landforms on Venus: Preliminary Results from Magellan*

McGill G. E. Stofan E. R. Saunders R. S. Ford P. G.

*Depositional and Structural Sequence Revealed by Mapping on Magellan Radar Images, Eistla Regio/Guinevere Planitia Area, Venus*

Mueller S. Grimm R. E. Phillips R. J.

*Interpretation of the Northern Boundary of Ishtar Terra from Magellan Images and Altimetry*

Parmentier E. M.

*The Width of Fault Zones in a Brittle-Viscous Lithosphere: Strike-Slip Faults*

Raitala J. Törmänen T.

*Horizontal Movements on Venus*

Rovetta M. R.

*Mantle Differentiation and Water Beneath Venus Craters*

Saunders R. S. Head J. W. Phillips R. J. Solomon S. C. Herrick R. Grimm R. Stofan E. R.

*Geology of Ovda Regio, Aphrodite Terra, Venus: Preliminary Results from Magellan Data*

Simons M. Solomon S. C. Hager B. H.

*Dynamic Models for Ridge Belt Formation on Venus*

Sarekar S. E. Solomon S. C.

*Gravitational Spreading of Danu, Freyja and Maxwell Montes, Venus*

Squyres S. W. Bindschadler D. L. Janes D. M. Schubert G. Sharpton V. L. Stofan E. R.

*Morphology and Evolution of Coronae and Ovoids on Venus*

Weinstein S. A. Olson P. L.

*The Relationship Between Surface Tectonic Style and Mantle Convection: Earth and Venus*

Williams D. R. Pan V.

*Parameterized Convection Models of the Degassing History of the Earth and Venus*

**Monday, March 18, 1991**  
**CHONDRULES AND CHONDRITES**  
1:30 p.m. GYM

Chairmen:      **A. M. Reid**  
                  **G. E. Lofgren**

Connolly Jr. H. C.\* Hewins R. H.

*The Experimental Production of Chondrule Rims: Constraints on Chondrule Rim Origins*

DeHart J. M.\* Lofgren G. E.

*Dynamic Crystallization Experiments and Cathodoluminescence Studies of Type I Chondrule Compositions*

Jones R. H.\* Lofgren G. E.

*A Comparison of Zoning Profiles in FeO-rich PO Chondrule Olivines and Experimental Analogues: Evidence for Metamorphic Reheating of Chondrules*

Lofgren G. E.\* DeHart J. M.

*An Experimental Study of Minor Element Partitioning in Olivine in Type IA Chondrules*

Lewis R. D.\* Lofgren G. E.

*The Effect of Sodium Vapor on the Sodium Content of Chondrules*

Nichols R. H. Jr.\* Hagee B. E. Hohenberg C. M.  
*Tieschitz Chondrules: I-Xe Systematics*

Scott E. R. D.\* Keil K. Stoffler D.  
*Comparison of Shock Metamorphism in Carbonaceous and Ordinary Chondrites*

Podesek F. A.\* Brannon J. C. Perron C. Pellas P.  
*Rb-Sr Systematics in Chondritic Metal*

Sears D. W. G.\* Benoit P. H.  
*The Thermal and Fragmentation History of H Chondrites: Antarctic and Non-Antarctic Comparisons*

Karlsson H. R.\* Jull A. J. T. Socki R. A. Gibson E. K. Jr.  
*Carbonates in Antarctic Ordinary Chondrites: Evidence for Terrestrial Origin*

Wasson J. T.\* Kallemeyn G. W. Rubin A. E. Whitlock R. Lewis C. F. Moore C. B.  
*Ordinary Chondrites Reduced During Metamorphism*

Xiao X. Lipschutz M. E.\*  
*Regolith Evolution on the Fayetteville Parent Body-- The Mobile Trace Element Story*

#### POSTER PRESENTATIONS

Jull A. J. T. Wlotzka F. Donahue D. J.  
*Terrestrial Ages and Petrologic Description of Roosevelt County Meteorites*

Kitamura M. Tsuchiyama A.  
*Comet-like Grand-parent Bodies for Shock Origin of Ordinary Chondrites*

**EUROMET**  
*European Activities in Meteorite and Cosmic Dust Collection on Antarctica*

Skinner W. R.  
*Origin of Chondrules by Droplet Coalescence: An Alternative to the Dust-Ball Hypothesis*

Sutton S. R. Spanne P. Rivers M. L. Jones K. W.  
*Computed Microtomography (CMT) of the Internal Structures of Rare Extraterrestrial Objects*

Yamamoto T. Kozasa T. Honda R. Mizutani H.  
*Chondrule Formation by Collisions Between Planetesimals*

Monday, March 18, 1991  
**MARS: REMOTE SENSING I**  
 1:30 p.m. Room 206

**Chairmen:** D. A. Paige  
 T. L. Roush

James P. B.\* Clancy R. T. Lee S. W. Singer R. Martin L. Kahn R. Zurek R.  
*Hubble Space Telescope Observations of Mars*

Trombka J. I.\* Evans L. G. Starr R. Floyd S. R. Squyres S. W. Whelan J. T. Barnford G. J. Coldwell R. L. Rester A. C. Surkov Yu. A. Moskaleva L. P. Kharyukova V. P. Manvelyan O. S. Zaitseva S. Ye. Smirnov G. G.  
*Analysis of Phobos Mission Gamma-Ray Spectra from Mars: Two Approaches*

O'Brien T. C.\* Jurgens R. F. Slade M. A. Howard S. D. Moore H. J. Thompson T. W.  
*Observations of Mars During the 1990 Opposition from the Goldstone Solar System Radar Facility at 3.53 cm Wavelength*

Coradini A.\* Cerroni P. Forni O. Bibring J. P. Gavrinishin I.  
*G-Mode Classification of Martian Infrared Spectral Data from ISM-Phobos 2*

Vaughan D. F.\* Zimbelman J. R.  
*Emissivity Effects on the Surface Temperature of Mars as Measured by the Infrared Thermal Mapper*

Roush T.\* Witteborn F. Lucey P. Graps A. Pollack J.  
*Thermal Infrared Observations of Mars (7.5-12.8 Micrometers) During the 1990 Opposition*

Christensen P. R.\*  
*Multi-spectral Thermal Infrared Observations of Mars: Implications for Compositional Variations*

Keegan K. D.\* Bachman J. E. Paige D. A.  
*Thermal and Albedo Mapping of the North Polar Region of Mars*

Paige D. A.\* Keegan K. D.  
*Thermal and Albedo Mapping of the South Polar Region of Mars*

Blaney D. L.\*  
*Infrared Imaging of Mars Between 2.4 Micrometers and 5.0 Micrometers*

Bell J. F. III\* Crisp D. A.  
*Near-Infrared (1.3-4.0 Micrometers) Imaging Spectroscopy of Mars*

Hurtrez S. Sotin C.\* Erard S. Bibring J.-P. Mustard J. Pieters C.  
*Evidences of Mixing Processes on Mars by Studying ISM Data*

#### POSTER PRESENTATIONS

Anderson D. L. Malin M. C. Barbera P. W.  
*Discriminating Basalts using Thermal Infrared Emission*

de Grenier M. Pinet P. Chevrel S.  
*Orbital (ISM) and Telescopic Near-Infrared Observations of the Surface of Mars: Comparison and Implications*

Jurgens R. F. Howard S. D. Slade M. A. Robinett L. Strobert D.  
*A Preliminary Study of the Potential for High Resolution Parametric Radar Imaging of Mars by Ground-based Radar*

Kuzmin R. O. Borozdin V. K. Selivanov A. S. Naraeva M. K. Gektin Yu. M. Kharlanov V. D. Romanov A. V. Fomin D. A. Dulytsky A. V. Shirenev A. M.  
*Thermal Inertia Mapping of Mars on the Base of VD and IR-imaging by Termoscan Instrument*

Moore H. J. O'Brien T. C. Jurgens R. F. Slade M. A. Thompson T. W.  
*Preliminary Comparison of 3.5-CM and 12.6-CM Wavelength Continuous Wave Observations of Mars*

Murchie S. L. Erard S. Mustard J. F. Bibring J.-P. Langevin Y. Head J. W. Pieters C. M.  
*Spectral Properties of Interior Deposits of Valles Marineris from ISM Imaging Spectroscopy*

Monday, March 18, 1991  
PLANETARY DIFFERENTIATION  
1:30 p.m. Room 204

Chairmen: H. Palme  
J. H. Jones

Shaffer E. E.\* Jurewicz A. J. G. Jones J. H.  
*Experimental Studies of the Volatility of V and Mn*

Spettel B. Palme H.\* Ionov D. A. Kogarko L. N.  
*Variations in the Iridium Content of the Upper Mantle of the Earth*

Rowan L. R.\* Ahrens T. J.  
*Impact-induced Metal-Silicate Melt Partitioning: First Results for Basalt*

Hillgren V. J.\* Capobianco C. J. Drake M. J.  
*Accretion and Core Formation in the Earth*

McFarlane E. A.\* Drake M. J. Herzberg C.  
*Magnesiowüstite/Melt and Majorite/Melt Partitioning and the Early Thermal History of the Earth*

Tonks W. B.\* Melosh H. J.  
*Core Formation by Giant Impacts*

Newsom H. E.\* Runcon S. K.  
*New Constraints on the Size of the Lunar Core and the Origin of the Moon*

LaTourrette T. Z.\* Burnett D. S.  
*Analytical and Experimental Actinide Partitioning in Natural Basalts*

Abe Y.\*  
*Differentiation, Mixing and Cooling in a Magma Ocean—Preliminary Considerations*

Pawley A. R.\* Holloway J. R.  
*Experimental Study of the Solubility of CO + CO<sub>2</sub> in Basalt, with Applications to Early Atmosphere/Magma Ocean Equilibria*

{ Honda M.\* McDougall I. Patterson D. B. Doulgeris A. Clague D. A.  
*A Solar Component in the Earth: Neon Isotope Anomalies in Loihi and Kilauea Basalts, Hawaii*

{ Finnla A. B.\* Rutherford M. J. Hess P. C.  
*Textural Equilibrium in Anorthite Melt Systems: Preliminary Results*

Hess P. C.\* Rutherford M. J. Finnla A. B.  
*Melt Connectivity, Decompaction and Polybaric Melting*

Gerasimov M. V.\* Dikov Yu. P. Wlotzka F. Mukhin L. M.  
*Al/Ca Signature of Vaporization Processes*

Tuesday, March 19, 1991  
**VENUS: VOLCANISM AND CRATERING**  
8:30 a.m. Room 104

**Chairmen:** G. G. Schaber  
J. E. Guest

Wilson L.\* Head J. W.

*Neutral Buoyancy Zones in the Venus Lithosphere: Influence on Volcanic Landforms and the Presence or Absence of Magma Chambers*

Guest J. E.\* Head J. W. Bulmer M. H. Wiles C. R.

*Volcanic Plains and Small Edifices*

Basilevsky A. T.\* Ivanov M. A. Nikolayeva O. V.

*Venera-8 Landing Site: Preliminary Analysis of Magellan Imagery*

Roberts K. M.\* Head J. W. Guest J. E.

*Mylitta Fluctus, Venus: Flow Characteristics and Sources*

Baker V. R.\* Komatsu G. Gulick V. C. Kargel J. S. Parker T. J.

*Channels on Venus: an Overview*

Komatsu G.\* Gulick V. C. Baker V. R. Parker T. J.

*Locations and Geological Settings of the Venusian Channels*

Campbell D. B.\* Stacy N. J. Ford P. G. Pettengill G. H. Arvidson R. E. Plaut J. J.

*Magellan Emissivity Measurements and Their Relationship to Geologic Features on the Surface of Venus*

Wood J. A.\* Klose K. B.

*Mineralogy on Venus and Areas of High Fresnel Reflection Coefficients Detected by Magellan Radar*

Longhi J.\* Pan V.

*Implications of the Venera 13 Surface Analysis for the CO<sub>2</sub> Content of the Interior of Venus*

Matsui T.\* Tajika E.

*Early Environmental Evolution of Venus*

Herrick R. R.\* Phillips R. J.

*Breakup of Meteoroids in the Venusian Atmosphere and its Effects on Crater Formation*

Ivanov B. A.\* Nemchinov I. V. Provalov V. A. Svetsov V. V. Khasins V. M.

*Impact Cratering on Venus: Physical and Mechanical Models*

Alexopoulos J. S.\* McKinnon W. B. Hillgren V. J.

*Multiringed Impact Craters of Venus from Arecibo and Venera Images*

## POSTER PRESENTATIONS

Batson R. M. Russell J. F.

*Naming the Newly Found Landforms on Venus*

Bulmer M. H. Guest J. E. Wiles C. R.

*Morphological Characteristics of Small Monogenetic Volcanoes in Southern Guinevere Planitia: Implications for Eruption Conditions*

Campbell B. A. Campbell D. B.

*Comparison of 1988 Arecibo Radar Images of Western Eistla Regio, Venus, and Multi-polarization Airborne Radar Images of Terrestrial Terrains*

Guest J. E. Lancaster M. G. Roberts K. Bulmer M. H.

*Volcanic Geology and Stratigraphy at Part of the Boundary Region Between Lavinia Planitia and Lada Terra*

Gulick V. C. Komatsu G. Baker V. R. Strom R. G. Parker T. J.

*Channels on Venus: A Preliminary Morphological Assessment and Classification*

Head J. W. Aubele J. C. E. N. Slyuta Campbell D. B.

*Small Shield Volcanoes in Guinevere Planitia, Venus: Characteristics and Modes of Occurrence*

Head J. W. Guest J. Schaber G. Roberts K. Senske D. Basilevsky A. Saunders R. de Charon A. Parker T. Klose B. Pavri B. De Jong E.

*Volcanic Centers and their Environmental Settings: New Data from Magellan*

Lancaster M. G. Guest J. E.

*Possible Sites of Explosive Volcanism in Southern Guinevere Planitia*

Malin M. C. Fink J. Griffiths R.

*Interpreting Venusian Lava Domes*

Mouginis-Mark P. J. Campbell B. A.

*Aircraft Imaging Radar Data of Hawaii: A Potential Magellan Analog*

Parker T. Komatsu G. Baker V. Gulick V. Saunders R. Weitz C. Head J.

*An Outflow Channel in Lada Terra, Venus*

Pavri B. Klose B. Head J. W.

*Steep-sided Domes on Venus: Characteristics and Implications for Composition and Eruption Conditions*

Plaut J. J. Arvidson R. E. Stofan E. R. Fisher P. C.

*Radar Properties in the Equatorial Plains of Venus—Influence of Impact, Volcanic and Tectonic Features*

Schultz P. H.

*Styles of Ejecta Emplacement Under Atmospheric Conditions*

Thornhill G. D.

*Theoretical Modelling of Plinian Eruption Plumes on Earth and Venus*

Tryka K. A. Muhleman D. O. Butler B. Berge G. Slade M. Grossman A.

*Correlation of Multiple Reflections from the Venus Surface with Topography*

Wall S. D. Elachi C.

*The Case for Subsurface Imaging on Venus by Magellan SAR*

Weitz C. Arvidson R. Greeley R. Saunders R. S. Elachi C. Farr T. Parker T. Plaut J. Stofan E. Wall S.

*A Preliminary Investigation of Aeolian Features of Venus Using Magellan Data*

Tuesday, March 19, 1991  
**MARS: REMOTE SENSING II**  
 8:30 a.m. GYM

Chairmen: **R. F. Jurgens**  
**D. W. Ming**

Hauber E.\* Hoffmann H. Rauch M. Neukum G.  
*Color Classification of the Martian Surface*

Harmon J. K.\* Sulzer M. P. Perillat P.  
*Mars Radar Mapping: Strong Depolarized Echoes from the Elysium/Amazonis Outflow Channel Complex*

Jurgens R. F.\* Slade M. A. Zisk S. H.  
*Normal Incidence Radar Observations of the "Stealth" South Tharsis Region*

Slade M. A.\* Hudson R. S. O'Brien T. C. Jurgens R. F.  
*Mars Radar Reflectivity Images from 1988 and 1990 CW Spectra*

Calvin W. M.\* King T. V. V.  
*Spectral Evidence for Carbonates on Mars: Hydrous Carbonates*

Mustard J. F.\* Erard S. Bibring J.-P. Langevin Y. Head J. W. Pieters C. M.  
*Composition of Syrtis Major Volcanic Plateau*

Golden D. C.\* Morris R. V. Ming D. W. Vempati R. K. Lauer H. V. Jr.  
*Mineralogy of Palagonitic Soils from Hawaii*

Bell J. F. III\* Morris R. V. Adams J. B.  
*Thermally Altered Palagonitic Tephra as a Martian Soil Analog?*

Morris R. V.\* Lauer H. V. Jr. Schulze D. G. Burns R. G.  
*Preparation and Characterization of a Nanophase Hematite Powder*

Fischer E. M.\* Pieters C. M. Pratt S. F.  
*The Perplexing Continuum Slope of Mars: Effects of Thin Ferric Coatings and Viewing Geometry*

Banin A.\* Blake D. F. Ben-Shlomo T.  
*Detection of Nanophase Lepidocrocite (Gamma-FeOOH) in Iron-Smectite Mars Soil Analog Materials (MarSAM)*

Bishop J. L.\* Pieters C. M. Edwards J. O. Coyne L. M. Chang S.  
*Spectroscopic Analyses of Fe and Water in Clays: A Martian Surface Weathering Study*

Dollfus A.\* Deschamps M. Zimbelman J.  
*Sensing the Soil Physics Properties at the Surface of Mars*

## POSTER PRESENTATIONS

Anderson D. L. Carpenter J. Christensen P. R. Barbera P. W.

*Development of a Sample Chamber for Thermal Infrared Emission Spectroscopy*

Evlanov E. N. Mukhin L. M. Prilutski O. F. Smirnov G. V. Juchniewicz J. Kunkeleit E. Klingefelter D. Knudsen J. M. d'Uston C.

*Mossbauer Backscatter Spectrometer for Mineralogical Analysis of the Mars Surface for Mars-94 Mission*

Farrand W. H. Singer R. B.

*Oxidation of Basaltic Tephra: Influence on Reflectance in the 1 Micrometer Region*

Kamenetskiy F. M. Linkin V. M. Ozorovich Yu. R.

*Possibility of E/M (Low-Frequency) Sounding of the Cryolitozone of Mars*

Ozorovich Yu. R. Raizer V. Yu.

*Microwave Remote Sensing of Martian Surface Parameters and Global Distribution of Cryolitozone of Mars*

Presley M. A. Christensen P. R.

*Laboratory Measurement of the Dependence of Particle Size on Thermal Conductivity under Martian Conditions*

Roush T. L. Blake D.

*Characterization of a Mauna Kea Palagonite Using Transmission Electron Microscopy*

Vaniman D. T. Bish D. L. Chipera S. J.

*In-Situ Planetary Surface Analyses: The Potential of X-Ray Diffraction with Simultaneous X-Ray Fluorescence*

Vempati R. K. Morris R. V. Lauer H. V. Jr.

*Effect of Mn Substitution on the Spectral Properties of Goethites and Hematites*

Tuesday, March 19, 1991

COSMIC DUST I

8:30 a.m. Room 206

Chairmen: D. E. Brownlee  
D. J. Lindstrom

Stadermann F. J.\*

*Rare Earth and Trace Element Abundances in Individual IDPs*

Cooke E. Flynn G. J.\* Sutton S. R.

*Low-Ni "Cosmic" Particles in the Stratospheric Dust Collection: An Examination of the JSC Catalog EDX Spectra*

Flynn G. J.\* Sutton S. R.

*Cosmic Class Stratospheric Particles: Trace Elements in C? Samples and Zn Depletions*

Lindstrom D. J.\* Zolensky M. E. Martinez R. R.

*INAA of Large Interplanetary Dust Particles from Collector L2005*

Zolensky M. E.\* Lindstrom D.

*Mineralogy of 12 Large "Chondritic" Interplanetary Dust Particles*

Thomas K. L.\* Keller L. P. Klock W. McKay D. S.

*Mineralogical and Chemical Constraints on Parent Bodies for Hydrated Interplanetary Dust Particles*

Bradley J. P.\* Humecki H. Germani M. Bales H.

*Combined Infrared (IR) and Analytical Electron Microscope (AEM) Studies of Thin-sectioned IDPS*

Reitmeijer F. J. M.\*

*Chemistry and Petrology of Low-Nickel Stratospheric Particles: A New Class of Interplanetary Dust Particles or Not?*

Brownlee D. E.\* Love S. Schramm L. S.

*Cosmic Spherules and Giant Micrometeorites as Samples of Main Belt Asteroids*

Klöck W.\* Beckerling W.

*Bulk Composition and Mineralogy of Micrometeorites from Greenland*

Steele I. M.\*

*Forsterite Compositions in Antarctic Micrometeorites Compared with Other Extraterrestrial Samples*

Sarda Ph.\* Staudacher Th. Allègre C. J.

*Complete Rare Gas Study of a Very Large Unmelted Cosmic Dust Particle from Greenland*

Davis A. M.\* Clayton R. N. Mayeda T. K. Brownlee D. E.

*Large Mass Fractionation of Iron Isotopes in Cosmic Spherules Collected from Deep-Sea Sediments*

Flynn G. J.\*

*Survival of Large Micrometeorites on Atmospheric Entry: Implications for Their Sources and the Flux of Cometary Dust*

#### POSTER PRESENTATIONS

Andreev V. V. Belkovich O. I.

*The Model of Zodiacal Light Derived from Meteor Observations*

Gibson E. K. Jr. Hartmetz C. P.

*Carbon-bearing Phases and Volatiles in Interplanetary Dust Particles*

Sutton S. R. Cholewa M. Bench G. Saint A. Legge G. J. F. Weirup D. Flynn G. J.

*Scanning Transmission Ion Microscopy (STIM): A New Technique for Density Mapping of Micrometeorites*

Tuesday, March 19, 1991  
BASALTIC LUNAR METEORITES  
8:30 a.m. Room 204

Chairman: P. H. Warren

Delaney J. S.\* Warren P. H. Kallemeyn G. W. Hervig R. L.

*Petrography of Samples for Consortium Studies of the Elephant Moraine 87521 Very-low Titanium Lunar Breccia*

Takeda H.\* Mori H. Miyamoto M.

*Mineralogical Studies of Lunar Mare Meteorites EET87521 and Y793274*

Dreibus G.\* Palme H. Spettel B. Wänke H.

*The Lunar Meteorite Elephant Moraine 87521: A Mixture of Low Ti Mare Basalt and Highland Material?*

Lindstrom M. M.\* Martinez R. R. Lipschutz M. E.

*Evidence for Magmatic Differentiation in Matrix Lithologies of Basaltic Lunar Meteorite EET87521*

Eugster O.\* Michel Th. Niedermann S.

*Regolith History of Lunar Meteorites EET87521 and Yamato-793274*

Vogt S.\* Herzog G. F. Klein J. Middleton R.

*Exposure History of the Lunar Mare Basalt EETA 87521*

Nishiizumi K. Arnold J. R.\* Sharma P. Kubik P. W. Klein J. Middleton R.

*Cosmic Ray Exposure History of Lunar Meteorite EET87521*

Tuesday, March 19, 1991

### LUNAR RESOURCE UTILIZATION

8:30 a.m. Room 204

Chairman: C. R. Coombs

Oder R. R.\*

*Magnetism of Lunar Soils*

McKay D. S.\* Morris R. V. Jurewicz A. J.

*Reduction of Simulated Lunar Glass by Carbon and Hydrogen and its Implications for Lunar Base Oxygen Production*

Feldman W. C.\* Reedy R. C.

*Sensitivity of Helium-3 Counters for Determination of the Lunar Hydrogen Content*

Gillett S. L.\* Chitwood L. A. York C. Billings T. Walden B.

*Geology of Young's Cave, Horse Lavatube System, Bend, Oregon: Implications for Lunar Base Siting*

### POSTER PRESENTATIONS

Beavers W. I. Tapia S. Cho J. Y-K.

*Photopolarimetric Studies of Resident Space Objects*

Cole K. J.

*Availability of Metal Oxides in the Lunar Regolith for Resources Utilization*

Walden B.

*Natural Shelter on Other Worlds*

Tuesday, March 19, 1991

### MOONVIEWS: FROM GALILEO, APOLLO, AND EARTH

1:30 p.m. Room 104

Chairmen: J. L. Whitford-Stark

E. J. Dasch

Belton M.\* Head J. Chapman C. Klaasen K. Anger C. Carr M. H. McEwen A. Pieters C. Davies M. Greeley R. Greenberg G. Neukum G. Pilcher C. Veverka J. Fanale F. Ingersoll A. Pollack J. Gierasch P. Morrison D. Paczkowski B. Cunningham W. DeJong E.

*The Galileo Solid State Imaging Experiment and Performance of the Camera at Earth-Moon Encounter*

Pieters C. M.\* Belton M. Becker T. Carr M. H. Chapman C. Fanale F. Fischer E. Gaddis L. Greeley R. Greenberg R. Hoffmann H. Head J. Helfenstein P. Jaumann R. Johnson T. V. Klaasen K. McEwen A. Murchie S. Neukum G. Oberst J. Pilcher C. Plutchak J. Pratt S. Robinson M. Sullivan R. Sunshine J. Veverka J.

*Crustal Heterogeneity of the Moon Viewed from the Galileo SSI Camera: Lunar Sample Calibrations and Compositional Implications*

Head J. W.\* Belton M. Carr M. H. Chapman C. Davies M. Fanale F. Fischer E. Greeley R. Greenberg R. Kolvoord R. Doose L. Helfenstein P. Hoffmann H. Jaumann R. Johnson T. Klaasen K. McEwen A. Becker T. Murchie S. Neukum G. Oberst J. Pieters C. Pilcher C. Plutchak J. Robinson M. Sullivan R. Sunshine J. Veverka J.

*Orientale and South Pole-Aitken Basins: Preliminary Galileo Imaging Results*

Greeley R.\* Belton M. Bolef L. Carr M. H. Chapman C. Davies M. Doose L. Fanale F. Gaddis L. Greenberg R. Head J. Hoffmann H. Jaumann R. Johnson T. Klaasen K. Kolvoord R. McEwen A. Murchie S. Neukum G. Oberst J. Pieters C. Pilcher C. Plutcbak J. Robinson M. Sullivan R. Sunshine J. Veverka J.

*Lunar Maria and Related Deposits: Preliminary Galileo Imaging Results*

Hawke B. R.\* Lucey P. G. Taylor G. J. Bell Jeffrey F. Peterson C. A. Blewett D. Horton K. Spudis P. D.  
*Remote Sensing Studies of the Orientale Basin Region*

Neukum G.\* Jaumann R. Hoffmann H. Oberst J. Wagner R. Regner P. Rebhan H. Heisinger H. Dummel A.  
*Earth-based Multispectral Observation of the Moon*

Johnson J. R.\* Larson S. M. Singer R. B.  
*Spectral Ratio Methods for Telescopic Lunar TiO<sub>2</sub> Mapping*

Coombs C. R.\* Hawke B. R.  
*New Discoveries of Pyroclastic Deposits on the Western Limb of the Moon*

Hawke B. R. Peterson C. A.\* Lucey P. G. Taylor G. J. Bell J. F. III Blewett D. Campbell B. Coombs C. R. Spudis P. D.

*Remote Sensing Studies of the Terrain Northwest of Humorum Basin*

Lucey P. G.\* Hawke B. R. Horton K.  
*Visible Infrared and Imaging of Copernicus Crater and Surroundings*

Cooper B. L.\* Sharpton V. L. Sapp C. A.  
*A New Look at Old Data: The Apollo 17 Lunar Sounder Experiment*

Whitford-Stark J. L.\*  
*Lunar Sinuous Rilles: Is There a Correlation Between Eruption Style and Lava Composition?*

Wichman R. W.\* Schultz P. H.  
*Igneous Intrusion Models for Floor Fracturing in Lunar Craters*

#### POSTER PRESENTATIONS

Bell J. F. III Hawke B. R.  
*CCD Narrowband Filter Imaging of Lunar Crater Rays*

Clark P. E. Basu A.  
*Distinctive Characteristics of the Aristarchus Plateau*

Coombs C. R. Hawke B. R.  
*On Hawaiian and Lunar Lava Tubes*

Davies M. E. Belton M. J. S. Chapman C. R. Head J. III Klaasen K. Paczkowski B. Yoshimizu J.  
*Galileo Views of the South Polar Region of the Moon*

Golombek M. P. Franklin B. J.  
*Modelled and Measured Strain in Mascon Basins on the Moon*

Larson S. M. Johnson J. R. Singer R. B.  
*Mapping Lunar Soil Maturity Using Groundbased CCD Multispectral Imagery*

McEwen A. Becker T. Belton M. Carr M. H. Chapman C. Davies M. Fanale F. Robinson M. Postawko S. Greeley R. Sullivan R. Moersch J. Gaddis L. Bolef L. Head J. Pieters C. Fischer E. Murchie S. Sunshine J. Plutchak J.  
 Johnson T. Klaasen K. Breneman H. Neukum G. Hoffmann H. Jaumann R. Pilcher C. Veverka J. Helfenstein P.  
*Lunar Multispectral Mosaics from Galileo Imaging*

Morgan P. Mendell W. W.  
*Evaluation of Geophysical Properties of the Lunar Regolith for the Design of Precursor Scientific Missions for the Space Exploration Initiative*

Shervais J. W. Erhlich R.  
*Polytopic Vector Analysis: Application to Lunar Petrogenesis*

Snyder G. A. Taylor L. A. Crozaz G.  
*K-Frac and REEP-Frac Immiscible Liquids at Apollo 14: A SIMS Search for the Real urKREEP Composition*

**Tuesday, March 19, 1991**  
**REFRACTORY INCLUSIONS**  
 1:30 p.m. GYM

**Chairmen:** T. R. Ireland  
 A. Hashimoto

El Goresy A.\* Zinner E. Caillet C. Virag A. Weinbruch S.  
*Allende TE: Evidence for Multiple Isotopic Fractionation Events Before and After Oxidation and Alteration*

Wang J.\* Davis A. M. Hashimoto A. Clayton R. N.  
*The Role of Diffusion in the Isotopic Fractionation of Magnesium During the Evaporation of Forsterite*

Tsuchiyama A.\* Imae N. Kitamura M.  
*Experiments on Reaction Between Forsterite and Si-rich Gas*

Sheng Y. J.\* Wasserburg G. J. Hutcheon I. D.  
*Mg Self-Diffusion in Spinel: Constraints on the Thermal History of Plagioclase-Olivine Inclusions*

Chamberlin L.\* Beckett J. R. Stolper E. M.  
*Experimental Determination of the Free Energy of Formation of  $MgAl_2O_4$  Spinel: An Important Constraint on Solar System Processes*

Paque J. M.\* Lofgren G.  
*Comparison of Experimental Studies on Chondrules and Ca-Al-rich Inclusions*

Fegley B. Jr.\*

*The Stability of Calcium Aluminate Minerals in the Solar Nebula*

Kennedy A. K.\* Hutcheon I. D. Wasserburg G. J.

*Trace Element Distributions in Compact Type A Ca-Al-Inclusions (CAI) in Allende and Leoville: Evidence for Dissolution of Relict Perovskite*

Eisenhour D. D.\* Buseck P. R.

*The Multistage Formation History of Fremdling AL-OAI: A TEM/EMPA Study of a Complex Opaque Assemblage*

Caillet C.\* Zinner E. K. MacPherson G. J.

*Mg/Al Isotopic Study of a Deformed and Recrystallized Leoville Type B Refractory Inclusion: Hot Accretion into a Cold Matrix, and If So When?*

Goswami J. N.\* Srinivasan G. Ulyanov A. A.

*Ion-Probe Studies of Efremovka CGIs-I: Magnesium Isotopic Composition*

MacPherson G. J.\* Davis A. M.

*Mg Isotopic and Trace Element Composition of Spinel-Pyroxene Inclusions in the Mighei C2 Meteorite*

Simon S. B.\* Grossman L.

*Petrography of a Suite of Refractory Inclusions from the Leoville, Efremovka and Vigarano Carbonaceous Chondrites*

Sylvester P. J.\* Grossman L.

*Chemical Compositions of Refractory Inclusions from Leoville, Efremovka and Vigarano*

## POSTER PRESENTATIONS

Fegley B. Jr. Ireland T. R.

*REE Abundance Patterns in CAIs: Implications for Nebular Processes*

Ireland T. R. Fegley B. Jr.

*REE Abundance Patterns in CAIs: A New Classification*

Hashimoto A.

*Evaporation Kinetics of Oxides of Rare Earth and Refractory Trace Elements, and the Chemical Fractionation of Hibonite by Evaporation*

Sheng Y. J. Beckett J. R. Hutcheon I. D. Wasserburg G. J.

*Experimental Constraints on the Origin of Plagioclase-Olivine Inclusions and CA Chondrules*

Spiegel D. R. Pellin M. J. Calaway W. F. Burnett J. W. Coon S. R. Young C. E. Gruen D. M. Davis A. M. Clayton R. N.

*Microbeam Titanium Isotopic Analysis by Resonance Ionization Mass Spectrometry*

Uyeda C. Tsuchiyama A.

*Isotopic Behavior of Mg and Si During Condensation Process of Silicates*

Tuesday, March 19, 1991  
COSMIC DUST II AND COMETS  
1:30 p.m. Room 206

**Chairmen:** M. E. Zolensky  
D. F. Blake

Zolensky M. See T.\* Atkinson D. Allbrooks M. Simon C. Finckenor M. Warren J. Christiansen E. Cardenas F.  
*Meteoroid and Orbital Debris Record of the Long Duration Exposure Facility*

McDonnell J. A. M.\*  
*Space Debris: Orbital Microparticulates Impacting LDEF Experiments Favour a Natural Extraterrestrial Origin*

Bernhard R. P. Brownlee D. E. Laurance M. R. Davidson W. L. Hörz F.\*  
*Survey-Type Analyses of Projectile Residues on Select LDEF Surfaces and Craters*

Warren J.\* See T. H. Cardenas F. Laurance M. Messenger S. Brownlee D. Hörz F.  
*Spatial Density, Size-Frequency and Implications of Craters >20 µm on Gold and Aluminum Surfaces Exposed by LDEF*

Hörz F.\* Messenger S. Bernhard R. See T. H. Haynes G.  
*Penetration Phenomena in Teflon and Aluminum Films Using 50-3200 µm Glass Projectiles*

Jackson A. A.\* Zook H. A.  
*Dust Particles from Comets and Asteroids: Parent-Daughter Relationships*

deNolfo G. Simpson J. A. Tuzzolino A. J.\* Ksanfomality L. V. Sagdeev R. Z.  
*Detection of Micron-sized Particles in Meteor Streams Crossing the Trajectories of the Vega-1 and Vega-2 Spacecraft*

Mukhin L. M.\* Evlanov E. N. Fomenkova M. N. Prilutsky O. F.  
*Two Populations of Comet Halley Dust Particles*

Mukhin L. M.\* Dolnikov G. G. Evlanov E. N. Fomenkova M. N. Prilutsky O. F.  
*The Bulk Composition of the Dust Component of Comet Halley*

Blake D. F.\* Allamandola L. J. Palmer G.  
*Eutectoid-like Phase Separation in H<sub>2</sub>O:CH<sub>3</sub>OH Ices: Microstructural Observations and Implications for the Physical Properties of Comets*

Gooding J. L. Allton J. H.\*  
*Water/Rock Interactions in Carbonaceous Chondrites: Possible Fingerprints for In-Situ Comet-Nucleus Analysis*

Espinasse S.\* Coradini A. Federico C. Capaccioni F.  
*Thermal Evolution and Physical Differentiation of Short Period Comets*

Boice D. C.\* Stern S. A. Huebner W. F.  
*On the Atmosphere of 2060 Chiron*

Marov M. Ya.\* Bisikalo D. V. Shematovich V. I.  
*The Kinetic Model of Photochemistry and Dynamics of the Cometary Inner Coma*

Weissman P.\* Clause C.  
*Thermal Modeling of Comet Kopff: Implications for the CRAF Mission*

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## POSTER PRESENTATIONS

**Barrett R. A. Zolensky M. E.**

*Analytical Studies of Impact Experiments Simulating Capture of Cosmic Dust in Silica Aerogel*

**Chakeveh S. Dent W.**

*First Millimeter Observations of Comet Austin 1989ci*

**Fomenkova M. N. Evlanov E. N. Mukhin L. M. Prilutsky O. F.**

*Determination of Mass of Comet Halley Dust Particles*

**Messenger S. Hörz F.**

*Projectile Fragmentation During Penetration of Thin Targets*

**Seregina N. V.**

*Mathematical Model of Thermal Processes in Cometary Nuclei*

**Singh P. D. de Almeida A. A. Huebner W. F.**

*Dust Production Rates in Eight Comets*

**Tuesday, March 19, 1991**

**SNCs, UREILITES, AND MAC88177**

**1:30 p.m. Room 204**

**Chairman: A. H. Treiman**

**D. Walker**

**McCoy T. J.\* Taylor G. J. Keil K. Noll P. D. Jr.**

*Zagami: Product of a Two-stage Magmatic History*

**Brearley A. J.\***

*Subsolidus Microstructures and Cooling History of Pyroxenes in the Zagami Shergottite*

**Treiman A. H.\* Sutton S. R.**

*Zagami: Trace Element Zoning of Pyroxenes by Synchrotron X-ray (SXRF) Microprobe, and Implications for Rock Genesis*

**Harvey R. P.\* McSween H. Y. Jr.**

*New Observations of Nakhla, Governador Valadares and Lafayette, and Their Bearing on Petrogenesis*

**Watson L. L.\* Ihinger P. D. Epstein S. Stolper E. M.**

*Hydrogen, Carbon and Oxygen Isotopic Composition of Volatiles in Nakhla*

**Gooding J. L.\* Wentworth S. J.**

*Origin of "White Druse" Salts in the EETA79001 Meteorite*

**Pan V.\* Holloway J. R. Bertka C. M.**

*The Role of CO<sub>2</sub> in the Formation of the Nakhrites: Metasomatism in the Martian Mantle*

**Mouginis-Mark P. J.\* McCoy T. J. Taylor G. J. Keil K.**

*Parent Craters for the SNC Meteorites*

**Goodrich C. A.\* Lugmair G. W.**

*PC82506: A Ureilite with LREE-enriched Component and a Whole-Rock Sm-Nd Model Age of 4.55 Ga*

Spitz A. H.\* Ruiz J.

*Determination of Trace Elements in Meteorites Using Inductively Coupled Mass Spectrometry*

Walker D.\* Grove T. L.

*Ureilite Parent Body Size(s): Smelting Experiments*

Takeda H.\* Saito J. Miyamoto M. Hiroi T.

*Mineralogy of MAC88177 and Comparison with Augite-bearing Lodranite, Yamato 74357*

Warren P. H.\* Kallemeyn G. W.

*Geochemistry of Unique Achondrite MAC88177: Comparison with Polymict Ureilite EET87720 and "Normal" Ureilites*

#### POSTER PRESENTATIONS

Prinz M. Chatterjee N. Weisberg M. K. Clayton R. N. Mayeda T. K.

*MAC8817: A New Type of Achondrite?*

Wright I. P. Hartmetz C. P. Russell S. S. Boyd S. R. Pillinger C. T. Meyer C.

*On the Properties of Xylan, a Lubricant Paint Used in the Dry-Nitrogen Sample-Handling Cabinets at NASA-JSC*

Wednesday, March 20, 1991

#### TERRESTRIAL IMPACT STRUCTURES

8:30 a.m. Room 104

Chairmen: V. L. Sharpton

D. A. Kring

Grieve R. A. F.\* Stoffler D. Deutsch A.

*The Sudbury Structure: An Emerging Perspective*

Engelhardt W. V.\* Matthai S. Walzebuck J.

*Araguainha Impact Structure, Brazil: Shocked Rocks of the Central Uplift*

Grant J. A.\* Schultz P. A.

*Characteristics of Ejecta and Alluvial Deposits at Meteor Crater, Arizona and Odessa Craters, Texas: Results from Ground Penetrating Radar*

Reimold W. U. Koeberl C.\* Kerr S. J. Partridge T. C.

*The Pretoria Saltpan - The First Firm Evidence for an Origin by Impact*

Plescia J. Shoemaker E. M.\* Shoemaker C. S.

*Gravity Survey of the Mt. Toondina Impact Structure, South Australia*

Anderson R. R.\* Hartung J. B.

*The Structural Configuration of the Manson Impact Structure, Iowa, as Interpreted from Seismic Data and Confirmed by Drill Samples*

Kring D. A.\* Hildebrand A. R. Boynton W. V.

*The Petrology of an Andesitic Melt Rock and a Polymict Breccia from the Interior of the Chicxulub Structure, Yucatán, Mexico*

Sharpton V. L.\* Schuraytz B. C. Ming D. W. Jones J. H. Rosencrantz E. Weidie A. E.

*Is the Chicxulub Structure in N. Yucatan a 200 km Diameter Impact Crater at the K/T Boundary? Analysis of Drill Core Samples, Geophysics, and Regional Geology*

Pope K. O.\* Ocampo A.C. Duller C. E.

*Hydrogeological Evidence for a Possible 200 KM Diameter K/T Impact Crater in Yucatan, Mexico*

Penfield G. T.\* Camargo A. Z.

*Interpretation of Geophysical Cross Sections on the North Flank of the Chicxulub Impact Structure*

McHone J. F.\* Dietz R. S.

*Isle of Pines, Cuba: K/T Impact Evidence Not Yet Found*

Alvarez W.\* Smit J. Anders M. H. Asaro F. Maurrasse F. J-M. R. Kastner M. Lowrie W.

*Impact-Wave Effects at the Cretaceous-Tertiary Boundary in Gulf of Mexico DSDP Cores*

Hut P. Shoemaker E. M.\* Alvarez W. Montanari A.

*Astronomical Mechanisms and Geologic Evidence for Multiple Impacts on Earth*

#### POSTER PRESENTATIONS

Hartung J. B. Anderson R. R.

*The Geology of the Manson Impact Structure: Sample Studies Reveal a Well Preserved Complex Impact Crater*

Monteiro J. F.

*The Guarda Circular Structure: A Possible Complex Impact Crater*

Petaev M. I. Kisarev Yu. L. Mustafin Sh. A. Shakurov R. K. Pavlov A. V. Ivanov B. A.

*Meteorite Sterlitamak -- A New Craterforming Fall*

Smit J. Alvarez W.

*Is the "Mid-Cretaceous Unconformity" in the Gulf of Mexico a Cretaceous-Tertiary Boundary Impact-Wave Erosion Surface?*

Theriault A. M. Reimold W. U.

*Field Studies of Bronzite Granophyre, Vredefort Structure, South Africa*

Wednesday, March 20, 1991  
MARS: CHANNELS AND WATER  
8:30 a.m. GYM

Chairmen: V. C. Gulick  
S. H. Williams

Carr M. H.\* Wänke H.

*Water on Mars*

Tanaka K. L.\*

*Hydrologic Activity During Late Noachian and Early Hesperian Downwarping of Borealis Basin, Mars*

De Hon R. A.\*

*Classification of Martian Lacustrine Basins*

Parker T. J.\* Gorsline D. S.

*Formation of Mangala Valles, Mars, Through Catastrophic Drainage of a Large Surface Lake*

Craddock R. A.\* Zimbelman J. R. Greeley R. Kuzmin R. O.  
*Volatile History of Mangala Valles, Mars*

De Hon R. A.\*  
*Polygenetic Origin of Hrad Vallis, Mars*

Chapman M. G.\* Tanaka K. L.  
*Channeling Episodes of Kasei Valles, Mars, and the Nature of Ridged Plains Material*

Williams S. H. Stice P. P.\*  
*The Plains Units of Southwestern Utopia Planitia, Mars: Constraints on an Ancient Martian Ocean*

Baker V. R.\* Strom R. G. Gulick V. C. Kargel J. S. Komatsu G. Kale V. S.  
*Ancient Oceans and Martian Paleohydrology*

Strom R. G.\* Kargel J. S. Johnson N. Knight C.  
*Glacial and Marine Chronology of Mars*

Kargel J. S.\* Strom R. G.  
*Terrestrial Glacial Eskers: Analogs for Martian Sinuous Ridges*

Kargel J. S.\* Strom R. G. Johnson N.  
*Glacial Geology of the Hellas Region on Mars*

Gulick V. C.\* Marley M. S. Baker V. R.  
*Numerical Modeling of Hydrothermal Systems on Martian Volcanoes: Preliminary Results*

#### POSTER PRESENTATIONS

Cabrol N. A. Grin E. A.  
*Mars: Relation Between Impact Seismicity and Runoff Formation by Fluidization of Permafrost*

Cave J. A.  
*Distribution of Volatiles in the Elysium Region, Mars*

Cave J. A.  
*Wet Debris Flow Deposits near Elysium Mons: Evidence from Crater Morphology*

Johnson N. Kargel J. S. Strom R. G. Knight C.  
*Chronology of Glaciation in the Hellas Region of Mars*

Metzger S. M.  
*A Survey of Esker Morphometries, the Connection to New York State Glaciation and Criteria for Subglacial Melt-Water Channel Deposits on the Planet Mars*

Parker T. J.  
*A Comparison of the Martian Medusae Fossae Formation with Terrestrial Carbonate Platforms*

Wednesday, March 20, 1991  
ROCKS: A TO HED  
8:30 a.m. Room 206

Chairman: M. Prinz  
J. Gooding

Pun A.\* Keil K. Taylor G. J. King E.

*A Unique Eucrite Clast from the Kapoeta Howardite*

Batchelor J. D.\* Sears D. W. G.

*Thermal History of the LEW85300, 85302, 85303 Shocked Eucrites: Thermoluminescence of Individual Clasts and Matrix*

Buchanan P. C.\* Reid A. M.

*Eucrite and Diogenite Clasts in Three Antarctic Achondrites*

Mittlefehldt D. W.\* Lindstrom M. M.

*Geochemistry of 5 Antarctic Howardites and Their Clasts*

Nyquist L. E.\* Bogard D. D. Garrison D. H. Bansal B. M. Wiesmann H. Shih C.-Y.

*Thermal Resetting of Radiometric Ages. I: Experimental Investigation*

Nyquist L. E.\* Bogard D. D. Garrison D. H. Bansal B. M. Wiesmann H. Shih C.-Y.

*Thermal Resetting of Radiometric Ages. II: Modeling and Applications*

Grove T. L.\* Bartels K. S.

*Primary Magnesian Eucrite Compositions: Estimates from the Compositions of Cumulate Diogenites*

Casanova I.\* Keil K. Newsom H. E.

*Geochemistry and Origin of Metal in Aubrites*

Lodders K.\* Palme H.

*Trace Elements in Mineral Separates of the Pena Blanca Springs Aubrite*

Lundberg L. L. Crozaz G.\* Zinner E.

*Ca and S Isotopic Compositions and REE Concentrations in Oldhamite of Five Unequilibrated Enstatite Chondrites*

Bogard D. D.\* Garrison D. H.

*<sup>39</sup>Ar-<sup>40</sup>Ar Dating of Three Enstatite Chondrites and the Shallowater Aubrite*

Lin Y. T. Nagel H.-J. Lundberg L. L. El Goresy A.\*

*MAC88136-The First EL3 Chondrite*

Nyquist L. E.\* Wiesmann H. Bansal B. Shih C.-Y. Harper C. L.

*<sup>53</sup>Mn and <sup>146</sup>Sms: Alive and Well in an Angrite Magma*

Yanai K.\*

*Olivine Fassaite Basalt: An Unusual Achondrite from Antarctica*

Jones J. H. Mittlefehldt D. W. Jurewicz A. J. G.\*

*Partial Melting of Carbonaceous Chondrites II: Constraints on the Origins of Basaltic Achondrites*

Jurewicz A. J. G.\* Jones J. H. Mittlefehldt D. W.

*Partial Melting of Carbonaceous Chondrites I: Allende (CV) and (Anhydrous) Murchison (CM)*

**POSTER PRESENTATIONS****Batchelor J. D.***Cathodoluminescence of Equilibrated and Unequilibrated Eucrites and the Discovery of Multiple Silica Populations***Sears D. W. G. Benoit P. H. Sears H. Batchelor J. D. Symes S.***The Natural Thermoluminescence Properties of Basaltic and Lunar Meteorites***Strait M. M. Mittlefehldt D. W. Lindstrom M. M.***Identifying and Using Weathered Antarctic Eucrites***Wednesday, March 20, 1991****MARS: GEOLOGY****1:30 p.m. Room 104****Chairmen:**      **N. G. Barlow**  
                        **P. R. Christensen****Edgett K. S.\* Christensen P. R.***Sand on Mars: The Properties of Dark Intracrater Deposits***Betts B. H.\* Murray B. C.***Martian Fluidized Ejecta Blankets as Seen in the Phobos '88 Ternoskan Data Set***Barlow N. G.\****Quantifying the Degradation State of Martian Impact Craters***Grant J. A.\* Schultz P. H.***Styles of Crater Gradation in Southern Ismenius Lacus, Mars***Clifford S. M.\* Cintala M. J. Barlow N. G.***An Estimate of the Global Thickness of Impact Melt on Mars***Frey H.\* Schultz R. A. Reidy A.-M. Wolfe H.***A Large Pre-Hellas Impact Basin in the Southern Hemisphere of Mars***Williams D. A.\* Greeley R.***The Formation of Antipodal-Impact Terrains on Mars***Landheim R.\* Barlow N. G.***Relative Chronology of Martian Volcanoes***Greeley R.\* Schneid B.***Magma Generation on Mars: Estimated Volumes Through Time***Robinson M. S.\* Smith M. O. Adams J. B.***Time Variable Spectral Feature at Apollinaris Patera, Mars***Rotto S. L.\* Tanaka K. L.***Geologic History and Channeling Episodes of the Chryse Planitia Region of Mars***Davis P. A.\* Tanaka K. L. Golombek M. P. Plescia J.***Interactions of Tectonic, Igneous, and Hydraulic Processes in the North Tharsis Region of Mars*

Frey H.\* Schultz R. A.

*Geologic and Topographic Constraints on the Origin and Development of the Martian Crustal Dichotomy: What They Do and Don't Require*

#### POSTER PRESENTATIONS

Herkenhoff K. E. Murray B. C.

*Geologic Map of the MTM-85080 Quadrangle, Mars*

Komatsu G. Strom R. G.

*Stratigraphy of the Layered Terrain in Valles Marineris, Mars*

Murchie S. L. Izenberg N. R.

*Integrated Geologic Map of the Equatorial Region of Mars*

Wu S. S. C. Howington-Kraus A. E. Ablin K.

*Elevation Distribution of Mars Topography*

Williams S. H.

*Dark Talus Streaks on Mars are Similar to Aeolian Dark Streaks*

Zimbelman J. R.

*Preliminary 1:500,000-scale Geologic Mapping of Arsia Mons, Mars*

Zisk S. H. Mouginis-Mark P. J. Goldspiel J. Slade M. A. Jurgens R. M.

*New Radar-derived Topography for Tyrrhena Patera, Mars*

Wednesday, March 20, 1991

FROM INTERSTELLAR GRAINS TO ASTEROIDS:

JOINT SESSION OF THE DIVISION FOR PLANETARY SCIENCES

AND THE METEORITICAL SOCIETY

1:30 p.m. GYM

Chairmen:

J. T. Wasson

E. M. Shoemaker

Bernatowicz T. J.\* Amari S. Zinner E. K. Lewis R. S.

*Interstellar Grains Within Intestellar Grains*

Virag A. Anders E.\* Zinner E. Lewis R. S.

*Aluminum-26: A Non-Uniform Heat Source in the Early Solar System*

Hashimoto A.\*

*Experimental Determination of Thermodynamic Properties of Ca-, Al- and Si-Hydroxide Gas Molecules and Application to the Solar Nebula*

Goodrich C. A. Drake M. J.\*

*Oxygen Isotopes and the Accretion of the Terrestrial Planets*

Wilson L.\* Keil K.

*Explosive Eruptions on Asteroids: The Missing Basalts on the Aubrite Parent Body*

Granahan J. C.\* Bell Jeffrey F.

*On the Geologic Reality of Asteroid Families*

Bell Jeffrey F.\*

*What are S-type Asteroids Made Of? (And will Gaspra Tell Us?)*

Taylor G. J.\*

*Differentiation Without Core Formation: S-asteroids and Stony-iron Meteorites*

McSween H. Y. Jr.\* Bennett M. E. III Jarosewich E.

*Mineralogy of Ordinary Chondrites and Implications for Asteroid Spectrophotometry*

Britt D. T.\* Pieters C. M.

*Darkening in Gas-rich Ordinary Chondrites: Spectral Modelling and Implications for Regoliths of Ordinary Chondrite Parent Bodies*

Salisbury J. W.\* D'Aria D. M. Jarosewich E.

*Mid-Infrared (3.08-14  $\mu\text{m}$ ) Spectra of Powdered Stony Meteorites*

Wednesday, March 20, 1991

### TERRESTRIAL IMPACTS: CHEMISTRY AND MINERALOGY

1:30 p.m. Room 206

Chairmen: W. Alvarez  
R. A. F. Grieve

Blum J. D.\* Papanastassiou D. A. Koeberl C. Wasserburg G. J.

*Nd and Sr Isotopic Study of Muong Nong and Splash-form Australasian Tektites*

Koeberl C.\* Auer P.

*Geochemistry of Impact Glass from the Aouelloul Crater, Mauritania*

Attrep M. Jr.\* Orth C. J. Quintana L. R. Shoemaker C. S. Shoemaker E. M. Taylor S. R.

*Chemical Fractionation of Siderophile Elements in Impactites from Australian Meteorite Craters*

Cygan R. T.\* Boslough M. B. Kirkpatrick R. J.

*NMR Spectroscopy of Experimentally Shocked Silicate Minerals*

Izett G. A.\*

*K-T Boundary Tektites from Near Beloc, Haiti*

Izett G. A.\* Dalrymple G. B. Snee L. W. Pringle M. S.

*$^{40}\text{Ar}/^{39}\text{Ar}$  Age (66-64 Ma) of K-T Boundary Tektites*

Premo W. R.\* Izett G. A.

*Nd-Sr Isotopic Signature of Tektites from the K-T Boundary on Haiti*

Sigurdsson H. D'Hondt S.\* Arthur M. A. Bralower T. J. Zachos J. C. van Fossen M. Channell J. E. T.

*Tektite Glass from the Cretaceous-Tertiary Boundary in Haiti*

D'Hondt S.\* Bralower T. J. van Fossen M. Channell J. E. T. Zachos J. C. Arthur M. A. Sigurdsson H.

*Stratigraphy of the Beloc, Haiti, Cretaceous-Tertiary Boundary Sequence*

Jéhanno C. Boclet D. Bonté Ph. Froget L. Lambert B. Larue D. K. Robin E. Rocchia R.\*

*The K/T Boundary at Beloc, Haiti: Evidence for a Cosmic Event*

Robin E.\* Boclet D. Bonté Ph. Froget L. Jéhanno C. Rocchia R.  
*The Significance of Ni-rich Magnetites for the Study of the K-T Boundary Event*

Bohor B. F.\* Betterton W. J.  
*Mineralogy of the K/T Boundary in a Deep-Sea Core: DSDP 596*

Smit J.\* Montanari A. Alvarez W.  
*Microkrystites and (micro)tektites at the KT boundary: Two different sources or one?*

Murali A. V.\* Blanchard D. P. Somayajulu B. L. K. Parekh P. P.  
*K-T Boundary Signatures in the Manganese Nodule Zetes-3D*

Schmitt R. A. Liu Y.-G.\* Walker R. J.  
*Shatsky Rise Evidences Support Hypothesis that Both a Bolide (Asteroid or Comet) Impact (BI) and Deccan Trap Floodings (DT) Caused Cretaceous/Tertiary (K/T) Extinctions and Not Hypothesis of Either BI or DT Alone, I*

Schmitt R. A. Liu Y.-G.\* Walker R. J.  
*Shatsky Rise Evidences Support Hypothesis that Both a Bolide (Asteroid or Comet) Impact (BI) and Deccan Trap Floodings (DT) Caused Cretaceous/Tertiary (K/T) Extinctions and Not Hypothesis of Either BI or DT Alone, II*

#### POSTER PRESENTATIONS

Bonte Ph. Turpin L. Sigurdsson H. Carpena J. Jehanno C.  
*Trace Element and Radiogenic Isotope Characteristics and Fission Track Dating of High-Silica and High-Ca Tektite Glasses from the Cretaceous-Tertiary Boundary at Beloc, Haiti*

Deino A. L. Garvin J. B. Montanari S.  
*K/T Age for the Popigai Impact Event?*

Jakeš P. Sen S. Matsuishi K.  
*Tektites, Experimental Equivalents and Properties of Superheated (Impact) Melts*

Koeberl C. Hartung J. B.  
*Manson Impact Structure Rocks: Geochemistry of Impactites*

Miura Y.  
*Formation Processes of Shocked Quartz by Impact Metamorphism*

Oskarsson N. Steinberg M. Pradel Ph. Helgason O. Sigurdsson H. D'Hondt S.  
*Oxygen Isotope Variation, Mossbauer Spectra or Iron Oxidation and Volatile Content of Tektite Glasses from the Cretaceous-Tertiary Boundary, Haiti*

Storzer D. Koeberl C.  
*Uranium and Zirconium Enrichments in Libyan Desert Glass: Zircon, Baddeleyite, and High Temperature History of the Glass*

Zolensky M. E. Koeberl C.  
*Liquid Immiscibility in an Impact Melt: Or Why Are Blue Zhamanshinites Blue?*

Wednesday, March 20, 1991  
IRONS AND MESOSIDERITES  
1:30 p.m. Room 204

Chairmen: **J. I. Goldstein**  
**A. E. Rubin**

Olsen E. J.\* Schwade J. Davis A. M. Clayton R. N. Mayeda T. K. Clarke R. S. Jr. Jarosewich E. Steele I. M.  
*Watson: A New Link in the IIE Iron Chain*

Palme H.\* Hutcheon I. D. Kennedy A. K. Sheng Y. J. Spettel B.  
*Trace Element Distribution in Minerals from a Silicate Inclusion in the Caddo IIAB-Iron Meteorite*

Zhang J. Williams D. B. Goldstein J. I.\*  
*Investigation of Plessite in Iron Meteorites and Laboratory Fe-Ni(P) Alloys*

Kurat G.\* Brandstätter F. Palme H. Spettel B.  
*Non-equilibria in the Acuna IIIAB Iron*

Creaser R. A.\* Chen J. H. Papanastassiou D. A. Wasserburg G. J.  
*Isotopic Analysis of Osmium, Rhenium and Iridium by Negative Thermal Ion Mass Spectrometry*

Morgan J. W.\* Walker R. J. Grossman J. N.  
*Rhenium and Osmium Abundances and Os-187/Os-186 Ratios in IIAB and IIIAB Iron Meteorites*

Hutcheon I. D.\* E. Olsen  
*Cr Isotopic Composition of Differentiated Meteorites: A Search for <sup>53</sup>Mn*

Rubin A. E.\* Mittlefehldt D. W.  
*Monogenic and Polygenic Silicate Clasts from Mesosiderites: Implications for Endogenous Igneous Processes*

Ganguly J.\* Yang H. Ghose S.  
*Cation Ordering in Orthopyroxene in Estherville Meteorite: Implications for Cooling Rate and Origin of Mesosiderite*

Chen J. H.\* Wasserburg G. J.  
*The Pg-Ag Systematics in Chondrites and Mesosiderites*

Bernius M. T. Hutcheon I. D. Wasserburg G. J.  
*Search for Evidence of <sup>26</sup>Al in Meteorites that are Planetary Differentiates*

Brouxl M.\* Tatsumoto M.  
*U-Th-Pb Systematics of Vaca Muerta Mesosiderite*

Stewart B. W.\* Cheng Q. C. Papanastassiou D. A. Wasserburg G. J.  
*Sm-Nd Systematics of Mesosiderites*

**POSTER PRESENTATIONS**

Mittlefehldt D. W. Cintala M. Hötz F.  
*Shock Recovery Experiments on Mesosiderite Analogs*

Thursday, March 21, 1991

**MARS: TECTONICS, GEOPHYSICS, ATMOSPHERE AND EXPLORATION**  
**8:30 a.m. Room 104**

**Chairmen:**      **B. K. Lucchitta**  
**M. P. Golombek**

**Lucchitta B. K.\* Chapman M. G. Isbell N. K.**  
*Valles Marineris Tectonism: Questions and Suggestions*

**Jöns H.-P.\***

*Comparative Planetology: Acheron Fossae-Scandia Colles, Mars: A Highly Degraded Pendant of the Tempe Terra Uplands with Respect to the Alba Patera System . . . and Alba Patera an Immature Venusian Corona?*

**Craddock R. A.\* Maxwell T. A.**

*Geologic and Tectonic History of Northern Lunae Planum, Mars*

**Frey H.\***

*Martian Crustal Dichotomy: Interplay Between Exogenic Origin and Later Endogenic Evolution*

**Forsythe R. D.\* Schultz R. A. Watters T. R.**

*Distributed Low Strain Regimes of the Terrestrial Planets*

**Phillips R. J.\* Grimm R. E.**

*Martian Seismicity*

**Golombek M. P.\* Tanaka K. L. Banerdt W. B. Tralli D.**

*Mars Seismicity Through Time from Surface Faulting*

**Zuber M. T.\* Smith D. E. Lerch F. J. Nerem R. S. Patel G. B. Fricke S. K.**

*A 40th Degree and Order Gravitational Field Model for Mars*

**Zent A. P.\* Haberle R. H. Houben H. Jakosky B. M.**

*A Coupled Subsurface Atmosphere Boundary Layer Model of H<sub>2</sub>O on Mars*

**Bickert K. F.\***

*A Cane for the Mars Rover*

**Allen C. C.\***

*Sterilization of Martian Samples by Gamma Irradiation*

**POSTER PRESENTATIONS**

**Costard F. M.**

*Ground-Ice Detection and Potential Landing Sites for the Mars 94 Mission*

**Kauhanen K. Raitala J.**

*Ridge Systems Related to Martian Impact Craters*

**Porter T. K. Crown D. A. Greeley R.**

*Timing and Formation of Wrinkle Ridges in the Tyrrhena Patera Region of Mars*

**Tanaka K. L. Schultz R. A.**

*Late Noachian Development of the Coprates Rise, Mars*

Watters T. R. Craddock R. A.

*Nature and Origin of Wrinkle Ridges in the Floor Material of Kasei Valles, Mars*

Thursday, March 21, 1991

ASTEROIDS

8:30 a.m. GYM

Chairmen: F. Vilas  
Jeffery F. Bell

Levison H. F. Shoemaker E. M.\* Wolfe R. F.

*Mapping the Stability Field of Jupiter Trojans*

Shoemaker E. M.\* Wolfe R. F. Shoemaker C. S.

*Asteroid Flux and Impact Cratering Rate on Venus*

Lebofsky L. A.\* Hubbard W. B. Asphaug E. Hunten D. M. Millis R. L. Franz O. G. Wasserman L. H. A'Hearn M. Schnurr R. Klemola A. R. Osborn W. Vilas F. Potter A. E. Maley P. D. Manly P. L.

*Diameter, Rotation, and Thermal Properties of Asteroid 4 Vesta*

Burbine T. H.\* Bell Jeffery F.

*Principal Component Analysis of Asteroid Spectra Using ECAs and 52-color Data*

King T. V. V.\* Clark R. N. Calvin W. M. Sherman D. M. Swayze G. A. Brown R. H.

*Evidence for Ammonium-bearing Minerals on Ceres*

Nuth J. A.\* Moore M. H. Tanabe T.

*The SiH Stretch as an Indicator of the Oxidation State of a Cometary/Asteroidal Regolith*

Festou M. C.\* Stern S. A. Tozzi G. P.

*The Albedo Map of 4 Vesta as Derived from UV to Near-IR Reflectance Spectra*

Gaffey M. J.\*

*Styles of Asteroidal Igneous Processes: Observational Constraints from Rotational Spectral Investigations*

Farinella P. Davis D. R.\* Cellino A. Zappalà V.

*Collisional Lifetime of 951 Gaspra*

Namiki N. Binzel R. P.\*

*The Evolution of the Surface of 951 Gaspra: A Pre-Galileo Estimate*

Yanagisawa M. Eluszkiewicz J.\* Ahrens T. J.

*Experimental Studies of Angular Momentum Transfer in Low Velocity Oblique Impacts: Implications for Asteroids*

Ryan E. V.\* Asphaug E. Melosh H. J.

*Hydrocode Predictions of Collisional Outcomes: Effects of Target Size*

#### POSTER PRESENTATIONS

Hoffmann H. Berger M. Neukum G.

*Ni- and Fe-Powders: Grain Size Effects and Compositional Influence on the Spectral Reflectance*

Sawyer S. R.

*A High Resolution CCD Spectroscopic Survey of Low Albedo Main Belt Asteroids*

Yanagisawa M. Iwasaki M. Yamori A. Kawashima N.  
*Efficiency of Angular Momentum Transfer for Iron Targets*

Thursday, March 21, 1991  
SOLAR NEBULA PHYSICS AND CHEMISTRY  
8:30 a.m. Room 206

Chairmen: A. G. W. Cameron  
C. L. Harper

Kolvoord R. A.\*  
*A Reexamination of Early Numerical Simulations of Planetary Accretion*

Weidenschilling S. J.\*  
*Dust Evolution in Solar Nebula Models with Generic Turbulence*

Boss A. P.\*  
*Second-Order Accurate Models of Solar Nebula Formation*

Stepinski T. F.\*  
*Ionization State and Magnetic Fields in the Solar Nebula*

Stepinski T. F.\*  
*Dynamo Magnetic Field Generation in the Solar Nebula*

Stern A.\*  
*On the Number of Planetary Bodies Created in the Outer Solar System*

Wetherill G.W.\*  
*Why Isn't Mars as Big as Earth?*

Malcuit R. J.\* Mehringer D. M. Winters R. R.  
*Numerical Simulation of Retrograde Tidal Capture of a Triton-like Planetoid by a Neptune-like Planet*

Slattery W. L.\* Benz W. Cameron A. G. W.  
*Effects of a Giant Impact on Uranus*

Cameron A. G. W.\* Benz W. Wasson J. T.  
*Heating During Asteroidal Collisions. II.*

Wulf A. V.\* Palme H.  
*Origin of Moderately Volatile Elements in Primitive Meteorites*

Harper C. L.\* Wiesmann H. Nyquist L. E. Howard W. M. Meyer B. Yokoyama Y. Rayet M. Arnould M.  
Palme H. Spettel B. Jochum K. P.  
*92Nb/93Nb and 92Nb/146Sm Ratios of the Early Solar System: Observations and Comparison of p-Process and Spallation Models*

KenKnight C. E.\*  
*Dissipation, Memory, and Reservoirs: The Ringlets of Saturn*

O'Keefe J. A.\*  
*The Cyrillic Shower: Remnant of a Circumterrestrial Ring?*

Thursday, March 21, 1991  
LUNAR HIGHLANDS  
8:30 a.m. Room 204

Chairmen: G. J. Taylor  
L. A. Haskin

Floss C.\* James O. B. McGee J. J. Crozaz G.

*Lunar Ferroan Anorthosites: Rare Earth Element Measurements of Individual Plagioclase and Pyroxene Grains*

Phinney W. C.\*

*Partition Coefficients for Fe, Mg, Ti and K Between Plagioclase and Basalt: Implications for Anorthosites*

Delaney J. S.\* Sutton S. R.

*Fe-Mn-Mg in Plagioclase from Lunar Basalt and Highland Samples*

Norman M. D.\* Taylor S. R.

*Geochemistry of Anorthosite Clasts from 67016: Evolution of the Lunar Crust and the Composition of the Moon*

Korotev R. L.\*

*On the Compositional Differences Between the "Ancient" and "Young" Regolith at Apollo 16*

Dalrymple G. B.\* Ryder G.

*40Ar/39Ar Laser Step Heating Ages of Some Apollo 15 Impact Melt Rocks*

Shih C. -Y.\* Wiesmann H. Nyquist L. E.

*Dating Lunar Granites by the K-Ca Chronometer*

Hinton R. W.\* Meyer C.

*Ion Probe Analysis of Zircon and Yttriotantalite in a Lunar Granite*

Meyer C.\* Galindo C. Yang V.

*Lunar Zircon*

Premo W. R.\* Tatsumoto M.

*Pb Isotopes in Troctolite 76535*

Marvin U. B.\* Holmberg B. B. Lindstrom M. M.

*New Observations on Polygonized Lunar Dunites*

Warren P. H.\* Jerde E. A. Kallemeij G. W.

*A 4.4-gram, Mostly Metal Rock from Apollo 14 with Attached, Cogenetic Silicates*

Neal C. R.\* Taylor L. A.

*Hazards Involved in Lunar Petrogenetic Interpretation: A Summary of Criteria Used to Establish the Pristinity and Monomict Nature of Moon Rocks*

#### POSTER PRESENTATIONS

Eckert J. O. Jr. Taylor L. A. Neal C. R. Patchen A. D.

*Anorthosites with Negative Eu Anomalies in Apollo 17 Breccias: Further Evidence for "REEP" Metasomatism*

Keller L. P. McKay D. S.

*Analytical Electron Microscopy of Fine-Grained Glass Spheres in Apollo 16 Soil 61181*

Neal C. R. Taylor L. A.

*The Origin of Whitlockite: Implications for the Evolution of the Lunar Highlands*

Shervais J. W. Vetter S. K.

*Auto-Metasomatism of the Western Lunar Highlands: Result of Closed System Fractionation and Mobilization of a KREEPy Trapped Liquid*

Snyder G. A. Taylor L. A.

*Basalt Boulders from Apollo 14 "Fall-Apart" Efforts: Mineralogy and Petrology*

Snyder G. A. Taylor L. A.

*Whitlockite-rich Basalts from 4-10 mm Boulders at Apollo 14: Mineralogy and Petrology*

Snyder G. A. Taylor L. A. Liu Y.-G. Schmitt R. A.

*Geochemistry of REEPy Basalts: A New Basalt Suite from Apollo 14*

Thursday, March 21, 1991  
CARBONACEOUS CHONDRITES  
1:30 p.m. Room 104

Chairmen: L. P. Keller  
M. M. Grady

Hewins R. H.\*

*Condensation and Mineral Assemblages of Chondrule Precursors*

Krishnamurthy R. V.\* Epstein S. Pizzarelli S. Cronin J. R. Yuen G. U.

*Stable Hydrogen and Carbon Isotope Ratios of Extractable Hydrocarbons in the Murchison Meteorite*

Mayeda T. K. Clayton R. N.\* Ikeda Y.

*Oxygen Isotopic Studies of Carbonaceous Chondrite Belgica-7904*

Johnson C. A.\* Prinz M.

*Carbonate Compositions in CM and CI Chondrites and Mg-Fe-Mn Partitioning During Aqueous Alteration*

Graham A. L.\* Kurat G.

*Phyllosilicates in the Yamato 82042 Carbonaceous Chondrite--Primitive or Not?*

Browning L.\* Zolensky M. Barrett R.

*Serpentine and Modal Compositions of CM Chondrites*

Keller L. P.\* Thomas K. L.

*Matrix Mineralogy of the Bali CV3 Carbonaceous Chondrite*

Weisberg M. K.\* Prinz M.

*Aqueous Alteration in CR2 Chondrites*

Grady M. M.\* Ash R. D. Pillinger C. T.

*EET 87770: A Light Element Stable Isotope Study of a New Renazzo-like Carbonaceous Chondrite*

Zanda B.\* Bourou-Denise M. Perron C.

*Cr, P and Si in the Metal of Renazzo*

Kalleymen G. W.\* Rubin A. E. Wasson J. T.

*The Karoonda (CK) Group of Carbonaceous Chondrites: A New Group Found Exclusively in Australia and Antarctica*

Jones R. H.\*

*Derivation of Isolated Olivine Grains in the Carbonaceous Chondrite ALH A77307 by Fragmentation*

Fisher D. S. Burns R. G.\*

*Pre-Terrestrial Oxidation Products of Iron Minerals in Carbonaceous Meteorites Identified in Mössbauer Spectra*

#### POSTER PRESENTATIONS

Brearley A. J.

*Mineralogical and Chemical Studies of Matrix in the Adelaide Meteorite, a Unique Carbonaceous Chondrite with Affinities to ALH A77307 (CO3)*

Radicati di Brozolo F. Ivanov I. C. Anderson C. L.

*High Resolution Scanning Auger Electron Imaging of Microtomed Sections of Murchison Matrix*

Scott E. R. D. Keil K. Stöffler D.

*Shock Metamorphism of Carbonaceous Chondrites*

Zolensky M. Barrett R. Ivanov A.

*Mineralogy and Matrix Composition of CI Clasts in the Chondrite Breccia Kaidun*

Thursday, March 21, 1991

OUTER SOLAR SYSTEM

1:30 p.m. GYM

Chairmen:

P. M. Schenk

W. M. Calvin

Domingue D. L.\* Lockwood G. W. Thompson D. T.

*Analysis of Callisto's Phase Curve as Derived from Telescopic Observations and Voyager Images*

Calvin W. M.\* Clark R. N. King T. V. V.

*New Spectral Observations of Callisto and Leading/Trailing Hemisphere Distinctions*

Kirby S. H. Durham W. B.\*

*Deep Moonquakes on Ganymede?*

Schenk P.\*

*Terrace Widths on Ganymede and Mars: The Strength and Composition(?) of Planetary Crusts*

Hogenboom D. L.\* Kargel J. S. Ganashan J. P. Lewis J. S.

*The Magnesium Sulfate-Water System at Pressures to 4 Kilobars*

Kargel J. S.\*

*Physical Properties of Cryovolcanic Brines: Applications to the Evolution of Ganymede*

Johnson M. L.\* Burnett D. S. Epstein S. Rice A.

*SO<sub>2</sub> Weathering on Io*

Goguen J. D.\* Veverka J. Matson D. L. Johnson T. V. Brown R. H. Toomey D. Sinton W. M.

*Simultaneous 3.8 and 10 Micrometer Observations of the '91 Occultations of Io by Europa*

Eluszkiewicz J.\*

*Kinetic Constraints on the Size of Nitrogen Grains on Triton*

Shock E. L.\* McKinnon W. B.

*Hydrothermal Processing of Cometary Volatiles-- Application to Triton*

Kirk R. L.\* Brown R. H.

*The Role of Nonuniform Internal Heating in Triton's Energy Budget*

Young L. A.\* Elliot J. L.

*The Test of the "Methane-Thermostat" Model for Pluto's Atmosphere*

Elliot J. L.\* Young L. A.

*Does Charon have an Atmosphere?*

#### POSTER PRESENTATIONS

Cole K. J.

*Can the Cassini Payload Conduct Pluto Flyby Science?*

Leith A. C. McKinnon W. B.

*Does Europa's Surface Manifest Evidence of Polar Wander?*

McEwen A. Duck B. Edwards K.

*Digital Cartography of Io*

Thursday, March 21, 1991  
**IMPACT MODELS AND EXPERIMENTS**  
 1:30 p.m. Room 206

Chairmen: K. A. Holsapple  
 M. J. Cintala

Vickery A. M.\* Melosh H. J.

*Melt Droplet Formation in Energetic Particles*

Roddy D. J.\* Schmitt R. A. Schuster S. H.

*Asteroid and Comet Impacts on Continental and Oceanic Sites: Computer Simulations of Cratering and Inferred Fe/Ir Ratios in Ejecta Vapor Compared with Fe/Ir Ratios Measured at the K/T Boundary from the Shatsky Rise (Pacific Ocean)*

O'Keefe J. D.\* Ahrens T. J.

*Tsunamis from Giant Impact Craters on Solid Planets*

Schultz P. H.\*

*Atmospheric Effects on Oblique Impacts*

Crawford D. A.\* Schultz P. H.

*The Spatial Distribution and Time Evolution of Impact-generated Magnetic Fields*

Adushkin V. V.\* S. P. Soloviev

*The Generation of Electric Fields Due to the Crater Formation*

Ivanov B. A.\*

*Hydrodynamic Model of Central Mound Formation at Meteorite Craters*

Smither C. L.\* Ahrens T. J.

*Energy Partitioning, Melting, and Vaporization for Impact on Finite Sized Planet*

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LUNAR MARE BASALTS

1:30 p.m. Room 204

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*Another (Re)View of Lunar Basaltic Magmatism*

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*The Sources of Mare Basalts Revisited: A Model Involving Lunar Magma Ocean Crystallization, Plagioclase Entrainment, and Trapped Instantaneous Liquid*

Snyder G. A.\* Taylor L. A. Neal C. R.

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*Major Element Trends in Apollo 15 Green Glass B*

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Sutton S. R.\* Jones K. W. Gordon B. Rivers M. L. Smith J. V.

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*Spectral Studies of the Lunar Flamsteed Region: Compositional Implications*

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8:00 p.m. Room 104

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Craig M. K.\*  
*An Overview of the Space Exploration Initiative*

Carr M. H. H.\*  
*Robotic and Human Exploration of Mars*

Taylor G. J.\* Spudis P. D.  
*Strategy for the Geologic Exploration of the Moon*

Vilas F.\*  
*Astronomical Observatories on the Moon*

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L. Wilson

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Plescia J. B.\*  
*Extension and Strain in Northern Tharsis*

Watters T. R.\* Tuttle M. J. Simpson D.  
*Wrinkle Ridge-Upland Scarp Transitions: Implications for the Mechanical Properties of Deformed Materials*

Schultz R. A.\*  
*Tectonic Reconstruction of the Ophir Planum Region, Central Valles Marineris, Mars (Or How Do You Make a Coprates Chasma?)*

Potapov A. V.\* Ivanov B. A.  
*Landslide Motion: Numerical Simulation for Earth and Mars*

Crisp J. A.\* Baloga S. M.  
*Thermal Processes in Lava Flows*

Bridges N.\* Fink J. Griffiths R.  
*The Effects of Cooling on Lava Dome Morphology*

Finn V. J.\* Baker V. R. Komatsu G.  
*Comparative Morphostructural Analysis of the Terrestrial Planets*

Whipple K. X. Zimbelman J. R.\*  
*Field Constraints on Remote Observations of Debris Flows and Lava Flows*

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*Experiments in Explosive Volcanism*

Kochel R. C. Carr Matthew  
*Preliminary Experiments with Escarpment Degradation in Frozen Sediment: Morphology, Process, and Implications for Landforms on Mars*

Wagner R. Neukum G.  
*Photogeologic Units and Fracture Systems in the Equatorial and Midlatitude Regions of Callisto*

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*The Figure of Phobos: An Update from the Phobos Mission*

Thomas P. C.\*  
*Phobos: Surface and Solid Body Properties from Digital Shape Data*

Langevin Y.\* Bibring J.-P. Gondet B. Cruikshank D.  
*ISM Observations of the Spectral Characteristics of Phobos in the Near Infrared*

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Murchie S. L.\* Erard S. Langevin Y. Britt D. T. Bibring J.-P. Mustard J. F. Head J. W. Pieters C. M.  
*Disk-resolved Spectral Reflectance Properties of Phobos from 0.3-3.2 Micrometers: Preliminary Integrated Results from Phobos 2*

Cruikshank D. P.\* Bartholomew M. J. Roush T.  
*Composition of the Surface of Phobos: Results from the Phobos Mission*

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*Mechanical Consequences of Impact Formed Crater Stickney on Phobos*

Jakeš P.  
*Phobos: Curious Alternatives of Origin Reconsidered*

Miller J. K. Duxbury T. C.  
*Determination of Phobos Gravity Harmonics Spin State, and Internal Properties*

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*Analysis of Hawaiian Lava Surface Roughness with Thermal Infrared Images*

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*Copernicus: Comparison and Complementarity Between Telescopic Multispectral Solid State Imaging and Reflectance Spectra*

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O. Eugster

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 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. 1:30 P.M., GYM  
 BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 PHOBOS, Fri. a.m., GYM  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 ROCKS: A TO HED, Wed. a.m., Rm. 206  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 ASTEROIDS, Thu. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
 ASTEROIDS, Thu. a.m., GYM  
 PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 COSMIC DUST I, Tue. a.m., Rm. 206  
 MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 ASTEROIDS, Thu. a.m., GYM
- Ganguly J.  
 Gao X.  
 Garrison D. H.  
 Garvin J. B.  
 Gerakimov M. V.  
 Gillett S. L.  
 Gilman I.  
 Goguen J. D.  
 Golden D. C.  
 Goldstein J. I.  
 Golombek M. P.  
 Gooding J. L.  
 Goodrich C. A.  
 Govwami J. N.  
 Grady M. M.  
 Graf T.  
 Graham A. L.  
 Granahan J. C.  
 Grant J. A.  
 Grant J. H.  
 Greeley R.  
 Greeley R.  
 Grieve R. A. F.  
 Grimm R. E.  
 Grove T. L.  
 Guest J. E.  
 Gulick V. C.  
 Hamm J. K.  
 Harper C. L.  
 Harvey R. P.  
 Hashimoto A.  
 Hauber E.  
 Hawke B. R.  
 Head J. W.  
 Head J. W.  
 Herrick D. L.  
 Herrick R. R.  
 Herzog G. F.  
 Hess P. C.  
 Hewins R. H.  
 Heymann D.  
 Hillgren V. J.
- IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 N AND ISOTOPES, Fri. a.m., Rm. 206  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. 1:30 P.M., GYM  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 ROCKS: A TO HED, Wed. a.m., Rm. 206  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 MARS: CHANNELS AND WATER, Wed. a.m., GYM  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. 1:30 P.M., GYM  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104  
 MAGELLAN AT VENUS, Moa. a.m., Rm. 104  
 MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204

- Hinton R. W.  
 Hiroi T.  
 Hogenboom D. L.  
 Holmberg B.  
 Holssapple K. A.  
 Honda M.  
 Horni K.  
 F. Hörrz  
 House K. R.  
 Huss G. R.  
 Hutchison I. D.  
 Ireland T. R.  
 Ivanov B. A.  
 Ivanov B. A.  
 Izett G. A.  
 Jackson A. A.  
 James P. B.  
 Johnson C. A.  
 Johnson C. L.  
 Johnson J. R.  
 Johnson M.  
 Jones R. H.  
 Jones R. H.  
 Jöns H.-P.  
 Jull A. J. T.  
 Jurewicz A. J. G.  
 Jurgens R. F.  
 Kallmeyn G. W.  
 Kargel J. S.  
 Kargel J. S.  
 Karlsson H. R.  
 Kaula W. M.  
 Keegan K. D.  
 Keller L. P.  
 KenKnight C. E.  
 Kennedy A. K.  
 Kerridge J. F.  
 Kiefer W. S.  
 Kin J. S.  
 King T. V. V.  
 Kirk R. L.  
 Klöck W.
- LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 ROCKS: A TO HED, Wed. a.m., Rm. 206  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 MARS: CHANNELS AND WATER, Wed. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 N AND S ISOTOPES, Fri. a.m., Rm. 206  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 ASTEROIDS, Thu. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 COSMIC DUST I, Tue. a.m., Rm. 206
- Koeberl C.  
 Koeberl C.  
 Kolvoord R. A.  
 Komatsu G.  
 Korotev R. L.  
 Kring D. A.  
 Krishnamurthy R. V.  
 Kurat G.  
 Landheim R.  
 Langevin Y.  
 LeTourneau T.  
 Lebofsky L. A.  
 Leitch A. M.  
 Lenardic A.  
 Lewis R. D.  
 Lewis R. S.  
 Lindstrom D. J.  
 Lindstrom M. M.  
 Lipschutz M. E.  
 Liu Y.-G.  
 Lodders K.  
 Losgren G. E.  
 Longhi J.  
 Longhi J.  
 Lucchitta B. K.  
 Lucey P. G.  
 MacPherson G. J.  
 Malcuit R. J.  
 Marvin U. B.  
 Matsui T.  
 McCoy T. J.  
 McDonnell J. A. M.  
 McFarlane E. A.  
 McHone J. F.  
 McKay D. S.  
 McKay G.  
 McSween H. Y.  
 Meyer C.  
 Mittelstaedt D. W.  
 Moncrief S.R.K.  
 Morgan J. W.  
 Moroz V. I.
- TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
 SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 PHOBOS, Fri. a.m., GYM  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 ASTEROIDS, Thu. a.m., GYM  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 COSMIC DUST I, Tue. a.m., Rm. 206  
 BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
 ROCKS: A TO HED, Wed. a.m., Rm. 206  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 SNCs, UREILITES AND MAI88177, Tue. p.m., Rm. 204  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. 1:30 P.M., GYM  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 ROCKS: A TO HED, Wed. a.m., Rm. 206  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 PHOBOS, Fri. a.m., GYM

- Morris R. V.  
 Mougiras-Mark P. J.  
 Mukhin L. M.  
 Murali A. V.  
 Murchie S. L.  
 Mustard J. F.  
 Namiki N.  
 Nash D. B.  
 Neal C. R.  
 Neukum G.  
 Newland H. E.  
 Nichols R. H. Jr.  
 Nishizumi K.  
 Norman M. D.  
 Nuth J. A.  
 Nyquist L. E.  
 O'Brien T. C.  
 O'Keefe J. A.  
 O'Keefe J. D.  
 Oder R. R.  
 Olsen E. J.  
 Olson P.  
 Paige D. A.  
 Palme H.  
 Palme H.  
 Pan V.  
 Paque J. M.  
 Parker T. J.  
 Pawley A. R.  
 Penfield G. T.  
 Peterson C. A.  
 Phillips R. J.  
 Phillips R. J.  
 Phinney W. C.  
 Pieters C. M.  
 Pleasants J. B.  
 Podosek F. A.  
 Pope K. O.  
 Potapov A. V.  
 Premo W. R.  
 Premo W. R.  
 Pun A.
- MARS: REMOTE SENSING II**, Tue. a.m., GYM  
**SNCs, UREILITES AND MAC88177**, Tue. p.m., Rm. 204  
**COSMIC DUST II AND COMETS**, Tue. p.m., Rm. 206  
**TERRESTRIAL IMPACTS: CHEM. & MINERAL.**, Wed. p.m., Rm. 206  
**PHOBOS**, Fri. a.m., GYM  
**MARS: REMOTE SENSING II**, Tue. a.m., GYM  
**VENUS TECTONICS**, Mon. p.m., Rm. 104  
**REMOTE SENSING AND INSTRUMENTATION**, Fri. a.m., Rm. 206  
**LUNAR HIGHLANDS**, Thu. a.m., Rm. 204  
**MOONVIEWS: FROM GALILEO**, ..., Tue. p.m., Rm. 104  
**PLANETARY DIFFERENTIATION**, Mon. p.m., Rm. 204  
**CHONDRULES AND CHONDrites**, Mon. p.m., GYM  
**COSMIC RAYS AND SOLAR WIND**, Fri. a.m., Rm. 204  
**LUNAR HIGHLANDS**, Thu. a.m., Rm. 204  
**ASTEROIDS**, Thu. a.m., GYM  
**ROCKS: A TO HED**, Wed. a.m., Rm. 206  
**MARS: REMOTE SENSING I**, Mon. p.m., Rm. 206  
**SOLAR NEBULA PHY. & CHEM.**, Thu. a.m., Rm. 206  
**IMPACT MODELS AND EXPERIMENTS**, Thu. p.m., Rm. 206  
**LUNAR RESOURCE UTILIZATION**, Tue. a.m., Rm. 204  
**IRONS AND MESOSIDERITES**, Wed. p.m., Rm. 204  
**VENUS TECTONICS**, Mon. p.m., Rm. 104  
**MARS: REMOTE SENSING I**, Mon. p.m., Rm. 206  
**IRONS AND MESOSIDERITES**, Wed. p.m., Rm. 204  
**PLANETARY DIFFERENTIATION**, Mon. p.m., Rm. 204  
**SNCs, UREILITES AND MAC88177**, Tue. p.m., Rm. 204  
**REFRACTORY INCLUSIONS**, Tue. p.m., GYM  
**MARS: CHANNELS AND WATER**, Wed. a.m., GYM  
**PLANETARY DIFFERENTIATION**, Mon. p.m., Rm. 204  
**TERRESTRIAL IMPACT STRUCTURES**, Wed. a.m., Rm. 104  
**MOONVIEWS: FROM GALILEO**, ..., Tue. p.m., Rm. 104  
**MAGELLAN AT VENUS**, Mon. a.m., Rm. 104  
**MARS: TECTONICS, GEOPHYSICS**, ..., Thu. a.m., Rm. 104  
**LUNAR HIGHLANDS**, Thu. a.m., Rm. 204  
**MOONVIEWS: FROM GALILEO**, ..., Tue. p.m., Rm. 104  
**PLANETARY GEOLOGICAL PROCESSES**, Fri. a.m., Rm. 104  
**CHONDRULES AND CHONDrites**, Mon. p.m., GYM  
**TERRESTRIAL IMPACT STRUCTURES**, Wed. a.m., Rm. 104  
**PLANETARY GEOLOGICAL PROCESSES**, Fri. a.m., Rm. 104  
**LUNAR HIGHLANDS**, Thu. a.m., Rm. 204  
**TERRESTRIAL IMPACTS: CHEM. & MINERAL.**, Wed. p.m., Rm. 206  
**ROCKS: A TO HED**, Wed. a.m., Rm. 206
- Rao M. N.  
 Reedy R. C.  
 Reitmeijer F. J. M.  
 Roberts K. M.  
 Robin E.  
 Robinson M. S.  
 Rocchia R.  
 Roddy D. J.  
 Rotto S. L.  
 Roush T. L.  
 Rowan L. R.  
 Rubin A.  
 Russell S. S.  
 Ryan E. V.  
 Ryder G.  
 Salisbury J. W.  
 Sammis C. G.  
 Sarda Ph.  
 Saunders R. S.  
 Schaber G. G.  
 Schenk P. M.  
 Schmidt R. M.  
 Schultz P. H.  
 Schultz R. A.  
 Schuraytz B. C.  
 Scott E. R. D.  
 Sears D. W. G.  
 See T.  
 Shaffner E. E.  
 Sharpton V. L.  
 Shearer C. K.  
 Shematovich V. I.  
 Sheng Y. J.  
 Shih C. -Y.  
 Shock E. L.  
 Shoemaker E. M.  
 Shoemaker E. M.  
 Shukolyukov A.  
 Simon S. B.  
 Slade M. A.  
 Slattery W. L.  
 Smit J.
- COSMIC RAYS AND SOLAR WIND**, Fri. a.m., Rm. 204  
**COSMIC RAYS AND SOLAR WIND**, Fri. a.m., Rm. 204  
**COSMIC DUST I**, Tue. a.m., Rm. 206  
**VENUS: VOLCANISM AND CRATERING**, Tue. a.m., Rm. 104  
**TERRESTRIAL IMPACTS: CHEM. & MINERAL.**, Wed. p.m., Rm. 206  
**MARS GEOLOGY**, Wed. p.m., Rm. 104  
**TERRESTRIAL IMPACTS: CHEM. & MINERAL.**, Wed. p.m., Rm. 206  
**IMPACT MODELS AND EXPERIMENTS**, Thu. p.m., Rm. 206  
**MARS GEOLOGY**, Wed. p.m., Rm. 104  
**MARS: REMOTE SENSING I**, Moa. p.m., Rm. 206  
**PLANETARY DIFFERENTIATION**, Moa. p.m., Rm. 204  
**IRONS AND MESOSIDERITES**, Wed. p.m., Rm. 204  
**INTERSTELLAR GRAINS**, Moa. a.m., GYM  
**ASTEROIDS**, Thu. a.m., GYM  
**LUNAR MARE BASALTS**, Thu. p.m., Rm. 204  
**FROM INTERSTELLAR GRAINS TO ASTEROIDS**, WED. 1:30 P.M., GYM  
**VENUS TECTONICS**, Moa. p.m., Rm. 104  
**COSMIC DUST I**, Tue. a.m., Rm. 206  
**MAGELLAN AT VENUS**, Mon. a.m., Rm. 104  
**MAGELLAN AT VENUS**, Mon. a.m., Rm. 104  
**OUTER SOLAR SYSTEM**, Thu. p.m., GYM  
**IMPACT MODELS AND EXPERIMENTS**, Thu. p.m., Rm. 206  
**IMPACT MODELS AND EXPERIMENTS**, Thu. p.m., Rm. 206  
**PLANETARY GEOLOGICAL PROCESSES**, Fri. a.m., Rm. 104  
**LUNAR MARE BASALTS**, Thu. p.m., Rm. 204  
**CHONDRULES AND CHONDrites**, Mon. p.m., GYM  
**CHONDRULES AND CHONDrites**, Mon. p.m., GYM  
**COSMIC DUST II AND COMETS**, Tue. p.m., Rm. 206  
**PLANETARY DIFFERENTIATION**, Mon. p.m., Rm. 204  
**TERRESTRIAL IMPACT STRUCTURES**, Wed. a.m., Rm. 104  
**LUNAR MARE BASALTS**, Thu. p.m., Rm. 204  
**COSMIC DUST II AND COMETS**, Tue. p.m., Rm. 206  
**REFRACTORY INCLUSIONS**, Tue. p.m., GYM  
**LUNAR HIGHLANDS**, Thu. a.m., Rm. 204  
**OUTER SOLAR SYSTEM**, Thu. p.m., GYM  
**ASTEROIDS**, Thu. a.m., GYM  
**TERRESTRIAL IMPACT STRUCTURES**, Wed. a.m., Rm. 104  
**COSMIC RAYS AND SOLAR WIND**, Fri. a.m., Rm. 204  
**REFRACTORY INCLUSIONS**, Tue. p.m., GYM  
**MARS: REMOTE SENSING II**, Tue. a.m., GYM  
**SOLAR NEBULA PHY. & CHEM.**, Thu. a.m., Rm. 206  
**TERRESTRIAL IMPACTS: CHEM. & MINERAL.**, Wed. p.m., Rm. 206

Smither C. L.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206	Wasson J. T.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Snyder G. A.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Watson L. L.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Solomon S. C.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104	Watters T. R.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
Sotin C.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Weidenschilling S. J.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Spitz A. H.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204	Weisberg M. K.	CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104
Squyres S. W.	VENUS TECTONICS, Mon. p.m., Rm. 104	Weissman P.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Stadermann F. J.	COSMIC DUST I, Tue. a.m., Rm. 206	Wetherill G. W.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Steck A. M.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Whitford-Stark J. L.	MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104
Steele I. M.	COSMIC DUST I, Tue. a.m., Rm. 206	Wichman R. W.	MOONVIEWS: FROM GALILEO, ..., Tue. p.m., Rm. 104
Stepinski T. F.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Wiens R. C.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
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 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 COSMIC DUST I, Tue. a.m., Rm. 206  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 ASTEROIDS, Thu. a.m., GYM  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 N ANDS ISOTOPES, Fri. a.m., Rm. 206  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104  
 COSMIC DUST I, Tue. a.m., Rm. 206  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
 PHOBOS, Fri. a.m., GYM  
 CHONDRULES AND CHONDrites, Mon. p.m., GYM

Cooke E.	COSMIC DUST I, Tue. a.m., Rm. 206
Coombs C. R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Coon S. R.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Cooper B. L.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Coradini A.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Coradini A.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Costard F. M.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Coyne L. M.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Craddock R. A.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Craig M. K.	SPACE EXPLORATION INITIATIVE, Thu. p.m., Rm. 104
Crawford D. A.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
Creaser R. A.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Crisp D. A.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Crisp J. A.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
Croft S. K.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
Cronin J. R.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Crown D. A.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Crozaz G.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Crozaz G.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Crozaz G.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Cruikshank D. P.	PHOBOS, Fri. a.m., GYM
Cunningham W.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Cushing J. A.	VENUS TECTONICS, Mon. p.m., Rm. 104
Cygan R. T.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
D'Aria D. M.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
D'Hondt S.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
d'Uston C.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Dalrymple G. B.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Dalrymple G. B.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Daech E. J.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Davidson W.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Davica M. E.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Davica M. E.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Davica M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Davica M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Davica M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Davica M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Davies M.	COSMIC DUST I, Tue. a.m., Rm. 206
Davis A. M.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Davis A. M.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Davis A. M.	ASTEROIDS, Thu. a.m., GYM
Davis D. R.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
	Davis P. A.
	de Almeida A. A.
	de Grenier M.
	De Hon R. A.
	DeJong E.
	de Vries M. S.
	deCharon A. V.
	deCharon A. V.
	DeHart J. M.
	Deino A. L.
	DeJong E.
	Delaney J. S.
	Delaney J. S.
	Delano J. W.
	Dennis T. J.
	deNoflo G.
	Dent W.
	Deschamps M.
	Deutsch A.
	Dietz R. S.
	Dikov Yu. P.
	Doherty P.
	Dollfus A.
	Dolnikov G. G.
	Domingue D. D.
	Douahue D. J.
	Douahue D. J.
	Doose L.
	Doulgeris A.
	Drake D. M.
	Drake M. J.
	Drake M. J.
	Dreibus G.
	Dross M.
	Duck B.
	Duller C. E.
	Dulytsky A. V.
	Dumaine A.
	Durham W. B.
	Duxbury T. C.
	Eckert J. O. Jr.
	Edgett K. S.
	MARS GEOLOGY, Wed. p.m., Rm. 104
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
	MARS: CHANNELS AND WATER, Wed. a.m., GYM
	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
	INTERSTELLAR GRAINS, Mon. a.m., GYM
	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
	VENUS TECTONICS, Mon. p.m., Rm. 104
	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
	INTERSTELLAR GRAINS, Mon. a.m., GYM
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	MARS: REMOTE SENSING II, Tue. a.m., GYM
	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204
	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
	MARS: REMOTE SENSING II, Tue. a.m., GYM
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	OUTER SOLAR SYSTEM, Thu. p.m., GYM
	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204
	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
	OUTER SOLAR SYSTEM, Thu. p.m., GYM
	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
	OUTER SOLAR SYSTEM, Thu. p.m., GYM
	PHOBOS, Fri. a.m., GYM
	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
	MARS GEOLOGY, Wed. p.m., Rm. 104

- Edwards J. O.  
Edwards K.  
Eisenhour D. D.  
El Goresy A.  
El Goresy A.  
Elachi C.  
Elachi C.  
Elliot J. L.  
Eluszakiewicz J.  
Eluszakiewicz J.  
Engelhardt W. v.  
Englert P. A. J.  
Epstein S.  
Epstein S.  
Epstein S.  
Erard S.  
Erard S.  
Erlich R.  
Espinasse S.  
Eugster O.  
Eugster O.  
EUROMET  
Evans L. G.  
Evanov E. N.  
Evanov E. N.  
Fanale F.  
Farinella P.  
Farr T.  
Farrand W. H.  
Federico C.  
Fegley B. Jr.  
Feldman W. C.  
Festou M. C.  
Fincknor M.  
Fink D.  
Fink J.  
Fink J.  
Finn V. J.  
Finnila A. B.  
Fischer E. M.
- MARS: REMOTE SENSING II, Tue. a.m., GYM  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
PHOBOS, Fri. a.m., GYM  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
N ANDS ISOTOPES, Fri. a.m., Rm. 206  
CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
ASTEROIDS, Thu. a.m., GYM  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
ASTEROIDS, Thu. a.m., GYM  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
MARS: REMOTE SENSING II, Tue. a.m., GYM
- Fiaenko A. V.  
Fisher D. S.  
Fisher P. C.  
Floes C.  
Floyd S. R.  
Flynn G. J.  
Fomenkova M. N.  
Fomin D. A.  
Ford P. G.  
Ford P. G.  
Ford P. G.  
Forni O.  
Foraythe R. D.  
Frank G.  
Frank S. L.  
Franklin B. J.  
Franz O. G.  
Freund F.  
Freund M. M.  
Frey H.  
Frey H.  
Fricke S. K.  
Fritz T. A.  
Froget L.  
Fujimura A.  
Gaddia L.  
Gaffey M. J.  
Galindo C.  
Ganasan J. P.  
Ganguly J.  
Gao X.  
Garrison D. H.  
Garrison D. H.  
Garvin J. B.  
Garvin J. B.  
Gault D.  
Gavrishin I.  
Geiss J.  
Gektin Yu. M.  
Gerasimov M. V.  
Germani M.
- MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
COSMIC DUST I, Tue. a.m., Rm. 206  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
VENUS TECTONICS, Mon. p.m., Rm. 104  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
ASTEROIDS, Thu. a.m., GYM  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
REMOTESENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
ASTEROIDS, Thu. a.m., GYM  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
N AND S ISOTOPES, Fri. a.m., Rm. 206  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
N AND S ISOTOPES, Fri. a.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
COSMIC DUST I, Tue. a.m., Rm. 206

Ghose S.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Grimm R. E.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Gibson E. K. Jr.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Grimm R. E.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Gibson E. K. Jr.	COSMIC DUST I, Tue. a.m., Rm. 206	Grimm R. E.	VENUS TECTONICS, Mon. p.m., Rm. 104
Giersch P.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Grin E. A.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Gillet S. L.	LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204	Groeslers E. B.	VENUS TECTONICS, Mon. p.m., Rm. 104
Gilmour I.	INTERSTELLAR GRAINS, Mon. a.m., GYM	Grossman A.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Goguen J. D.	OUTER SOLAR SYSTEM, Thu. p.m., GYM	Grossman J. N.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Golden D. C.	MARS: REMOTESENSING II, Tue. a.m., GYM	Grossman L.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Goldman I.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Grove T. L.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Goldspiel J.	MARS GEOLOGY, Wed. p.m., Rm. 104	Grove T. L.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Goldstein J. I.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Gruen D. M.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Golombek M. P.	MARS GEOLOGY, Wed. p.m., Rm. 104	Guest J. E.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Golombek M. P.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Guest J. E.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Golombek M. P.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Guha S.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Gondet B.	PHOBOS, Fri. a.m., GYM	Gulick V. C.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Gooding J. L.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206	Gulick V. C.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Gooding J. L.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206	Haberle R. M.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Gooding J. L.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204	Hagee B. E.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Goodrich C. A.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM	Hager B. H.	VENUS TECTONICS, Mon. p.m., Rm. 104
Goodrich C. A.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204	Hare J. P.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Gordon B.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Harmon J. K.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Gorsline D. S.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Harper C. L.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Goswami J. N.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Harper C. L.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Grady M. M.	CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104	Harper C. L.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Graf Th.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Harris L. J.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
Graham A. L.	CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104	Hartmetz C. P.	COSMIC DUST I, Tue. a.m., Rm. 206
Granahan J. C.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM	Hartmetz C. P.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Grant J. A.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Hartung J. B.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Grant J. H.	MARS GEOLOGY, Wed. p.m., Rm. 104	Hartung J. B.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Graps A.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Harvey R. P.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Greeley R.	MARS GEOLOGY, Wed. p.m., Rm. 104	Hashimoto A.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Greeley R.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Hashimoto A.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Greeley R.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Hashizume K.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Greeley R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Haskin L. A.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Greeley R.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104	Hauber E.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Greeley R.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Hawke B. R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Greenberg G.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Haynes G.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Greenberg R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Head J. W.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Grieve R. A. F.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Head J. W.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Griffiths R.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104	Head J. W.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Griffiths R.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Head J. W.	PHOBOS, Fri. a.m., GYM
Grigoryev A. V.	PHOBOS, Fri. a.m., GYM	Head J. W.	VENUS TECTONICS, Mon. p.m., Rm. 104

- Head J. W.  
 Heisinger H.  
 Helfenstein P.  
 Helgason O.  
 Hellings R. W.  
 Herkenhoff K. E.  
 Herkenhoff K. E.  
 Herrick D. L.  
 Herrick R. R.  
 Herrick R. R.  
 Herrick R. R.  
 Hervig R. L.  
 Herzberg C.  
 Herzog G. F.  
 Herzog G. F.  
 Hess P. C.  
 Hewins R. H.  
 Hewins R. H.  
 Heymann D.  
 Heymann D.  
 Hildebrand A. R.  
 Hillgren V. J.  
 Hillgren V. J.  
 Hinton R. W.  
 Hiroi T.  
 Hiroi T.  
 Hoffmann H.  
 Hoffmann H.  
 Hoffmann H.  
 Hoffmann H.  
 Hogenboom D. L.  
 Hohenberg C. M.  
 Holloway J. R.  
 Holloway J. R.  
 Holloway J. R.  
 Holmberg B. B.  
 Holmberg B. B.  
 Holsapple K. A.  
 Honda M.  
 Honda R.  
 Horai K.  
 Horton K.
- VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 PHOBOS, Fri. a.m., GYM  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 VENUS TECTONICS, Mon. p.m., Rm. 104  
 BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 ASTEROIDS, Thu. a.m., GYM  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 OUTER SOLAR SYSTEM, Thu. p.m., GYM  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
 LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
 REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
- Hörz F.  
 Hörz F.  
 Houben H.  
 Housen K. R.  
 Howard S. D.  
 Howard W. M.  
 Howington-Kraus A.E.  
 Hubbard W. B.  
 Hudson R. S.  
 Huebner W. F.  
 Humayun M.  
 Humecki H.  
 Hunten D. M.  
 Hunziker H.  
 Hurtrez S.  
 Huss G. R.  
 Hut P.  
 Hutchison I. D.  
 Hutchison I. D.  
 Hutchison I. D.  
 Ingerer P. D.  
 Ikeda Y.  
 Imamura N.  
 Ingersoll A.  
 Ionoov D. A.  
 Ireland T. R.  
 Ireland T. R.  
 Ireland T. R.  
 Isbell N. K.  
 Ivanov A.  
 Ivanov B. A.  
 Ivanov I. C.  
 Ivanov M. A.  
 Iwasaki M.  
 Izenberg N. R.  
 Izett G. A.  
 Jackson A. A.  
 Jackson C.
- COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 ASTEROIDS, Thu. a.m., GYM  
 MARS: REMOTE SENSING II, Tue. a.m., GYM  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 N AND S ISOTOPES, Fri. a.m., Rm. 206  
 COSMIC DUST I, Tue. a.m., Rm. 206  
 ASTEROIDS, Thu. a.m., GYM  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
 PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
 INTERSTELLAR GRAINS, Mon. a.m., GYM  
 N AND S ISOTOPES, Fri. a.m., Rm. 206  
 REFRACTORY INCLUSIONS, Tue. p.m., GYM  
 MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
 PHOBOS, Fri. a.m., GYM  
 PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
 TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
 VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
 ASTEROIDS, Thu. a.m., GYM  
 MARS GEOLOGY, Wed. p.m., Rm. 104  
 TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
 COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
 COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204

Jakeš P.	PHOBOS, Fri. a.m., GYM	Kallemejn G. W.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Jakeš P.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Kallemejn G. W.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Jakosky B. M.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Kallemejn G. W.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
James O. B.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204	Kameretskiy F. M.	MARS: REMOTE SENSING II, Tue. a.m., GYM
James P. B.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Kargel J. S.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
James D. M.	VENUS TECTONICS, Mon. p.m., Rm. 104	Kargel J. S.	OUTER SOLAR SYSTEM, Thu. p.m., GYM
Jarosewich E.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM	Karsson H. R.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Jarosewich E.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Kastner M.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Jäumann R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Kato M.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Jäumann R.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Kauhanen K.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
Jehnsoo C.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Kaula W. M.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Jerde E. A.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204	Kaula W. M.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Jochum K. P.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Kawashima N.	VENUS TECTONICS, Mon. p.m., Rm. 104
Johnson C. A.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104	Keegan K. D.	ASTEROIDS, Thu. a.m., GYM
Johnson C. L.	VENUS TECTONICS, Mon. p.m., Rm. 104	Keifer W. S.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Johnson J. R.	LUNARMARE BASALTS, Thu. p.m., Rm. 204	Keil K.	VENUS TECTONICS, Mon. p.m., Rm. 104
Johnson J. R.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Keil K.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Johnson M. L.	OUTER SOLAR SYSTEM, Thu. p.m., GYM	Keil K.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Johnson N.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Keller L. P.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Johnson T. V.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Keller L. P.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Johnson T. V.	OUTER SOLAR SYSTEM, Thu. p.m., GYM	Keller L. P.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Jones A. M.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104	KeaKnight C. E.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Jones J. H.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Kennedy A. K.	COSMIC DUST I, Tue. a.m., Rm. 206
Jones J. H.	ROCKS: A TO HED, Wed. a.m., Rm. 206	Kennedy A. K.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Jones J. H.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Kerr S. J.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Jones K. W.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Kerridge J. F.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Jones K. W.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Kharlamov V. D.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Jones R. H.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104	Kharyukova V. P.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Jones R. H.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Khasins V. M.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Jöns H.-P.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Khatunsev I. V.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Juchniewicz J.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Kim J. S.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Jull A. J. T.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Kim J. S.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Jull A. J. T.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Kim Y.	PHOBOS, Fri. a.m., GYM
Jurewicz A. J. G.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	King E.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
Jurewicz A. J. G.	ROCKS: A TO HED, Wed. a.m., Rm. 206	King T. V. V.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Jurewicz A. J.	LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204	King T. V. V.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Jurgens R. F.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	King T. V. V.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Jurgens R. F.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Kirby S. H.	ASTEROIDS, Thu. a.m., GYM
Jurgens R. M.	MARS GEOLOGY, Wed. p.m., Rm. 104	Kirk R. L.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Kahn R.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206		OUTER SOLAR SYSTEM, Thu. p.m., GYM
Kale V. S.	MARS: CHANNELS AND WATER, Wed. a.m., GYM		OUTER SOLAR SYSTEM, Thu. p.m., GYM
Kallemejn G. W.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204		OUTER SOLAR SYSTEM, Thu. p.m., GYM

Kirkpatrick R. J.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Landheim R.	MARS GEOLOGY, Wed. p.m., Rm. 104
Kisarev Yu. L.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Langevin I.	PHOBOS, Fri. a.m., GYM
Kitamura M.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Langevin Y.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Kitamura M.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Langevin Y.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Kiyota K.	N AND S ISOTOPES, Fri. a.m., Rm. 206	Larimer R. M.	PHOBOS, Fri. a.m., GYM
Klassen K.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Larson S. M.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
Klein J.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204	Larson S. M.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
KleinJ.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Laue D. K.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Klemola A. R.	ASTEROIDS, Thu. a.m., GYM	LeTourrette T. Z.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Klingefelter D.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Lauer H. V. Jr.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204
Klöck W.	COSMIC DUST I, Tue. a.m., Rm. 206	Laurance M.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Klose B.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Le L.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Klose K. B.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Lebofsky L. A.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Knight C.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Lee S. W.	ASTEROIDS, Thu. a.m., GYM
Kradsen J. M.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Legge G. J. F.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Kochel R. C.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104	Leitch A. M.	COSMIC DUST I, Tue. a.m., Rm. 206
Koeberl C.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Leith A. C.	VENUS TECTONICS, Mon. p.m., Rm. 104
Koeberl C.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Lenardic A.	OUTER SOLAR SYSTEM, Thu. p.m., GYM
Kogarko L. N.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Lerch F. J.	VENUS TECTONICS, Mon. p.m., Rm. 104
Kolvoord R. A.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	LeRoy R. C.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Kolvoord R. A.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Lesbre O.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Komatsu G.	MARS GEOLOGY, Wed. p.m., Rm. 104	Lesko K. T.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Komatsu G.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Levison H. F.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
Komatsu G.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104	Lewis C. F.	ASTEROIDS, Thu. a.m., GYM
Komatsu G.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Lewis J. S.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Körfer M.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Lewis R. D.	OUTER SOLAR SYSTEM, Thu. p.m., GYM
Korotev R. L.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204	Lewis R. S.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Kozsza T.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Lewis R. S.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Kring D. A.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Lin Y. T.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Krishnamurthy R. V.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104	Lindstrom D. J.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Kroto H. W.	INTERSTELLAR GRAINS, Mon. a.m., GYM	Lindstrom M. M.	COSMIC DUST I, Tue. a.m., Rm. 206
Ksanfomality L. V.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206	Lindstrom M. M.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
Ksanfomality L. V.	PHOBOS, Fri. a.m., GYM	Lindstrom M. M.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Kubik P. W.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204	Linkin V. M.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Kubik P. W.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Lipschutz M. E.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Kunkel E.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Lipschutz M. E.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
Kurat G.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104	Liu F.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Kurat G.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Liu Y.-G.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Kuzmin R. O.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Liu Y.-G.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Kuzmin R. O.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Liu Y.-G.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Lambert B.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Lockwood G. W.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Lancaster M. G.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104		OUTER SOLAR SYSTEM, Thu. p.m., GYM

- Lodder K.  
Lofgren G. E.  
Lofgren G.  
Longhi J.  
Longhi J.  
Love S.  
Lowrie W.  
Lucchitta B. K.  
Lucey P. G.  
Lucey P. G.  
Lugmair G. W.  
Lugmair G.  
Lundberg L. L.  
MacPherson G. J.  
Malcuit R. J.  
Maley P. D.  
Malin M. C.  
Malin M. C.  
Malin M. C.  
Mandy P. L.  
Manvelyan O. S.  
Marley M. S.  
Marov M. Ya.  
Marti K.  
Marti K.  
Martin L.  
Martinez R. R.  
Martinez R. R.  
Marvin U. B.  
Masson Ph.  
Matson D. L.  
Matsui T.  
Matsuishi K.  
Matthäi S.  
Maurrasse F. J-M. R.  
Maxwell T. A.  
Mayeda T. K.  
Mayeda T. K.  
Mayeda T. K.  
Mayeda T. K.  
McCoy J. E.  
McCoy T. J.
- ROCKS: A TO HED, Wed. a.m., Rm. 206  
CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
COSMIC DUST I, Tue. a.m., Rm. 206  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
ASTEROIDS, Thu. a.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
VENUS TECTONICS, Mon. p.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
ASTEROIDS, Thu. a.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MARS: CHANNELS AND WATER, Wed. a.m., GYM  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
N AND ISOTOPES, Fri. a.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
COSMIC DUST I, Tue. a.m., Rm. 206  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
VENUS TECTONICS, Mon. p.m., Rm. 104  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
COSMIC DUST I, Tue. a.m., Rm. 206  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
COSMIC DUST I, Tue. a.m., Rm. 206  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
- McDonnell J. A. M.  
McDougall I.  
McEwen A.  
McEwen A.  
McFarlane E. A.  
McGee J. J.  
McGill G. E.  
McGill G. E.  
McHone J. F.  
McKay D. S.  
McKay D. S.  
McKay G.  
McKenzie D. P.  
McKenzie D. P.  
McKinnon W. B.  
McKinnon W. B.  
McSween H. Y. Jr.  
McSween H. Y. Jr.  
Mehringer D. M.  
Melendrez D. E.  
Meloah H. J.  
Meloah H. J.  
Mendell W. W.  
Measenger S.  
Metzger S. M.  
Meyer B.  
Meyer C.  
Meyer C.  
Michel Th.  
Middleton R.  
Middleton R.  
Miller J. K.  
Millis R. L.  
Ming D. W.  
Ming D. W.  
Mittlefehdlt D. W.  
Miura Y.  
Miura Y.  
Miyamoto M.
- COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
COSMIC DUST I, Tue. a.m., Rm. 206  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
ASTEROIDS, Thu. a.m., GYM  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
MARS: CHANNELS AND WATER, Wed. a.m., GYM  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
PHOBOS, Fri. a.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204

- Miyamoto M.  
Mizutani H.  
Mizutani H.  
Mizutani H.  
Moersch J.  
Moncrief S. R. K.  
Montanari A.  
Montanari A.  
Montanari S.  
Monteiro J. F.  
Moore C. B.  
Moore H. J.  
Moore H. J.  
Moore M. H.  
Morgan J. W.  
Morgan P.  
Mori H.  
Moroz V. I.  
Morris R. V.  
Morris R. V.  
Morris R. V.  
Morrison D.  
Moskaleva L. P.  
Mouginis-Mark P. J.  
Mouginis-Mark P. J.  
Mouginis-Mark P. J.  
Mueller S.  
Muhleman D. O.  
Mukhin L. M.  
Mukhin L. M.  
Mukhin L. M.  
Murali A. V.  
Murchie S. L.  
Murchie S. L.  
Murchie S.  
Murray B. C.  
Mustafin Sh. A.  
Mustard J. F.  
Mustard J. F.  
Mustard J. F.  
Nagel H.-J.
- SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
ASTERIODS, Thu. a.m., GYM  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
PHOBOS, Fri. a.m., GYM  
LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
MARS: REMOTESENSING II, Tue. a.m., GYM  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
PHOBOS, Fri. a.m., GYM  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
MARS GEOLOGY, Wed. p.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
PHOBOS, Fri. a.m., GYM  
ROCKS: A TO HED, Wed. a.m., Rm. 206
- Namiki N.  
Namiki N.  
Napier B.  
Naraeva M. K.  
Nash, D. B.  
Neal C. R.  
Neal C. R.  
Nemchinov I. V.  
Nerem R. S.  
Neugebauer M.  
Neukum G.  
Neukum G.  
Neukum G.  
Neukum G.  
Neukum G.  
Newsom H. E.  
Newsom H. E.  
Newton J.  
Nichols R. H. Jr.  
Niedermann S.  
Nikolayeva D. V.  
Nikolay Yu. V.  
Nishizumi K.  
Nishizumi K.  
Noll P. D. Jr.  
Norman E. B.  
Norman M. D.  
Nuth J. A.  
Nyquist L. E.  
Nyquist L. E.  
Nyquist L. E.  
O'Brien T. C.  
O'Brien T. C.  
O'Keefe J. A.  
O'Keefe J. D.  
Oberst J.  
Obradovic M.  
Ocampo A.C.  
Oder R. R.  
Olsen E. J.  
Olson P. L.
- ASTERIODS, Thu. a.m., GYM  
VENUS TECTONICS, Mon. p.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
ASTERIODS, Thu. a.m., GYM  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
PHOBOS, Fri. a.m., GYM  
BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
ASTERIODS, Thu. a.m., GYM  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
VENUS TECTONICS, Mon. p.m., Rm. 104

Orth C. J.	TERRRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Perron C.	CHONDRULES AND CHONDrites, Mon. p.m., GYM
Osborn W.	ASTEROIDS, Thu. a.m., GYM	Petaev M. I.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Oskarsen N.	TERRRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Peterson C. A.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Ort U.	INTERSTELLAR GRAINS, Mon. a.m., GYM	Peterson E.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Ozorovich Yu. R.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Pettengill G. H.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Paczkowski B.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Pettengill G. H.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Paczkowski B.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Phillips R. J.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Paige D. A.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Phillips R. J.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Palme H.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204	Phillips R. J.	VENUS TECTONICS, Mon. p.m., Rm. 104
Palme H.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Phinney W. C.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Palme H.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Pieters C. M.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Palme H.	ROCKS: A TO HED, Wed. a.m., Rm. 206	Pieters C. M.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Palme H.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Pieters C. M.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Palmer G.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206	Pieters C. M.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Pan V.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204	Pieters C. M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Pan V.	VENUS TECTONICS, Mon. p.m., Rm. 104	Pilcher C.	PHOBOS, Fri. a.m., GYM
Pan V.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Pillinger C. T.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Papanastassiou D. A.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Pillinger C. T.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Papanastassiou D. A.	TERRRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Pillinger C. T.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Papike J. J.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Piperi M. M.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Paque J. M.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Pinet P.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Parekh P. P.	TERRRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Pinet P.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Parker T. J.	MARS: CHANNELS AND WATER, Wed. a.m., GYM	Pizzarello S.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Parker T. J.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Plaut J. J.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Parmentier E. M.	VENUS TECTONICS, Mon. p.m., Rm. 104	Plescia J. B.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Parsons B. E.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104	Plescia J. B.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Parsons B. E.	VENUS TECTONICS, Mon. p.m., Rm. 104	Plutchak J.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
Partridge T. C.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Podosek F. A.	MARS GEOLOGY, Wed. p.m., Rm. 104
Patchen A. D.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204	Pollack J.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Patel G. B.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Pollack J.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Patterson D. B.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Pope K. O.	CHONDRULES AND CHONDrites, Mon. p.m., GYM
Paul R. L.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Porter T. K.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Pavlov A. V.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Postawko S.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Pavri B.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Potapov A. V.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Pawley A. R.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Potter A. E.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Pedroni A.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Pradel Ph.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Pellas P.	CHONDRULES AND CHONDrites, Mon. p.m., GYM	Pratt S. F.	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
Pellin M. J.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Pratt S. F.	ASTEROIDS, Thu. a.m., GYM
Penfield G. T.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Pratt S. F.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Pepin R. O.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Pratt S. F.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Perillat P.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Pratt S. F.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Perron C.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104	Pratt S. F.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104

- Premo W. R.  
Premo W. R.  
Presley M. A.  
Prilutski O. F.  
Prilutsky O. F.  
Pringle M. S.  
Prinz M.  
Prinz M.  
Pfrombo C. A.  
Provalov V. A.  
Pun A.  
Quintana L. R.  
Radicati di Brozolo F.  
Raitala J.  
Raitala J.  
Raizer V. Yu.  
Rao M. N.  
Rauch M.  
Ravine M. A.  
Rayet M.  
Resenberg R. D.  
Rebhan H.  
Rebhan H.  
Reedy R. C.  
Reedy R. C.  
Reeves G. D.  
Regner P.  
Reid A. M.  
Reidy A.-M.  
Reimold W. U.  
Reimold W. U.  
Reitmeijer F. J. M.  
Rester A. C.  
Rice A.  
Rivers M. L.  
Rivers M. L.  
Roberts K. M.  
Roberts K. M.  
Robin E.  
Robinett L.  
Robinson M. S.  
Robinson M. S.
- LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
CARBONACEOUS CHONORITES, Thu. p.m., Rm. 104  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
MARS: REMOTE SENSING II, Tue. a.m., GYM  
MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
COSMIC DUST I, Tue. a.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
VENUS TECTONICS, Mon. p.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
- Rochia R.  
Roddy D. J.  
Rogers P. G.  
Román H.  
Romanov A. V.  
Rosecrantz E.  
Rotto S. L.  
Roush T. L.  
Roush T. L.  
Roush T. L.  
Rovetta M. R.  
Rowan L. R.  
Rowland S. K.  
Rubin A. E.  
Rubin A. E.  
Rubin A. E.  
Ruff S. W.  
Ruiz J.  
Runcorn S. K.  
Russell J.  
Russell S. S.  
Russell S. S.  
Rutherford M. J.  
Ryan E. V.  
Ryan E. V.  
Ryder G.  
Ryder G.  
Sagdeev R. Z.  
Saint A.  
Saito J.  
Salisbury J. W.  
Sammis C. G.  
Sandwell D. T.  
Sapp C. A.  
Sarda Ph.  
Saunders R. S.  
Saunders R. S.  
Sawyer S. R.  
Schaber G. G.  
Schaber G. G.  
Schaber G.
- TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
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MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
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COSMIC DUST I, Tue. a.m., Rm. 206  
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VENUS TECTONICS, Mon. p.m., Rm. 104  
VENUS TECTONICS, Mon. p.m., Rm. 104  
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VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
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VENUS TECTONICS, Mon. p.m., Rm. 104  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104

- Schenk W. V.  
Schenk P.  
Schenk P.  
Schmidt R. M.  
Schmitt R. A.  
Schneid B.  
Schnurr R.  
Schramm L. S.  
Schubert G.  
Schubert G.  
Schultz P. A.  
Schultz P. H.  
Schultz R. A.  
Schultz R. A.  
Schulze D. G.  
Schuraytz B. C.  
Schuraytz B. C.  
Schuster S. H.  
Schwade J.  
Scott E. R. D.  
Scott E. R. D.  
Sears D. W. G.  
Sears D. W. G.  
Sears D. W. G.  
See T. H.  
See T. H.  
Selivanov A. S.  
Semjonova L. F.  
Sen S.  
Senake D. A.  
Senake D. A.  
Seregina N. V.  
Shaffier E. E.  
Shakurov R. K.  
Sharma P.
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IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
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VENUS TECTONICS, Mon. p.m., Rm. 104  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206  
MARS GEOLOGY, Wed. p.m., Rm. 104  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
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MARS GEOLOGY, Wed. p.m., Rm. 104  
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MARS: REMOTE SENSING II, Tue. a.m., GYM  
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IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104  
CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
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COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
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MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
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- Sharpton V. L.  
Sharpton V. L.  
Sharpton V. L.  
Shearer C. K.  
Shelfer T. D.  
Shematovich V. I.  
Sheng Y. J.  
Sheng Y. J.  
Sherman D. M.  
Shervais J. W.  
Shervais J. W.  
Shih C.-Y.  
Shih C.-Y.  
Shih C.-Y.  
Shirevav A. M.  
Shock E. L.  
Shoemaker C. S.  
Shoemaker C. S.  
Shoemaker C. S.  
Shoemaker E. M.  
Shoemaker E. M.  
Shoemaker E. M.  
Shukolyukov A.  
Shukolyukov Yu. A.  
Shunk E. R.  
Signer P.  
Signer P.  
Sigurdsson H.  
Simoa C.  
Simoa S. B.  
Simons M.  
Simpson D.  
Simpson J. A.  
Sinclair A. M.  
Singer R. B.  
Singer R. B.  
Singh P. D.  
Simon W. M.  
Sisterson J. M.  
Skinner W. R.  
Slade M. A.
- COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
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COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
ASTEROIDS, Thu. a.m., GYM  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
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COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
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COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
VENUS TECTONICS, Mon. p.m., Rm. 104  
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MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
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CHONDRULES AND CHONDRITES, Mon. p.m., GYM  
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Slade M. A.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Starr R.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Slade M. A.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Staudacher Th.	COSMIC DUST I, Tue. a.m., Rm. 206
Slade M.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Steele A. M.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Slattery W. L.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Steele I. M.	COSMIC DUST I, Tue. a.m., Rm. 206
Slyuta E. N.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Steinberg M.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Smirnov G. G.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Stepinski T. F.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Smirnov G. V.	MARS: REMOTE SENSING II, Tue. a.m., GYM	Stern A.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Smit J.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104	Stern S. A.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206
Smith D. E.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104	Stern S. A.	ASTEROIDS, Thu. a.m., GYM
Smith J. V.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Stewart B. W.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Smith J.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Stice P. P.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Smith M.O.	MARS GEOLOGY, Wed. p.m., Rm. 104	Stofan E. R.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Snoeher C. L.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206	Stofan E. R.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Sotekar S. E.	VENUS TECTONICS, Mon. p.m., Rm. 104	Stößfler D.	VENUS TECTONICS, Mon. p.m., Rm. 104
Sone L. W.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Stößfler D.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Snyder G. A.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204	Stößfler D.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Snyder G. A.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204	Stößfler D.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Snyder G. A.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Stolper E. M.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Sochi R. A.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Stolper E. M.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Soderblom L. A.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104	Stone J.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Solomon S. C.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104	Storzer D.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Solomon S. C.	VENUS TECTONICS, Mon. p.m., Rm. 104	Strait M. M.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Soloviev S. P.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206	Strobert D.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Somayajulu B. L. K.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206	Strom R. G.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Sotin C.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Strom R. G.	MARS GEOLOGY, Wed. p.m., Rm. 104
Sotin C.	VENUS TECTONICS, Mon. p.m., Rm. 104	Sugiura N.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Soubbot J. R.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204	Sullivan R.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Spanne P.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM	Sulzer M. P.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Spettel B.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204	Sunshine J. M.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Spettel B.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204	Sunshine J. M.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Spettel B.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204	Sur B.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Spittel B.	SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206	Surkov Yu. A.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Spiegel D. R.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Sutton S. R.	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
Spitz A. H.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204	Sutton S. R.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Spudis P. D.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104	Sutton S. R.	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
Spudis P. D.	SPACE EXPLORATION INITIATIVE, Thu. p.m., Rm. 104	Sutton S. R.	COSMIC DUST I, Tue. a.m., Rm. 206
Squyres S. W.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104	Sutton S. R.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Squyres S. W.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206	Sutton S. R.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Squyres S. W.	VENUS TECTONICS, Mon. p.m., Rm. 104	Sutton S. R.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Srinivasan G.	REFRACTORY INCLUSIONS, Tue. p.m., GYM	Svetsov V. V.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Stacy N. J.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104	Swanson P. D.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Stadermann F. J.	COSMIC DUST I, Tue. a.m., Rm. 206	Swayze G. A.	ASTEROIDS, Thu. a.m., GYM

Sylvester P. J.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Symes S.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Tajika E.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Takagi Y.	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
Takeda H.	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
Takeda H.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Talwani M.	MAGELLAN AT VENUS, Mon. a.m., Rm. 104
Tanabe T.	ASTEROIDS, Thu. a.m., GYM
Tanaka K. L.	MARS GEOLOGY, Wed. p.m., Rm. 104
Tanaka K. L.	MARS: CHANNELS AND WATER, Wed. a.m., GYM
Tanaka K. L.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Tanaka S.	REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206
Tapia S.	LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204
Tatsumoto M.	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
Tatsumoto M.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Taylor G. J.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Taylor G. J.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Taylor G. J.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Taylor G. J.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Taylor G. J.	SPACE EXPLORATION INITIATIVE, Thu. p.m., Rm. 104
Taylor L. A.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Taylor L. A.	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
Taylor L. A.	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
Taylor R.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Taylor S. R.	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
Taylor S. R.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Theriault A. M.	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
Thiemens M. H.	N AND S ISOTOPES, Fri. a.m., Rm. 206
Thomas K. L.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Thomas K. L.	COSMIC DUST I, Tue. a.m., Rm. 206
Thomas P. C.	PHOBOS, Fri. a.m., GYM
Thompson D. T.	OUTER SOLAR SYSTEM, Thu. p.m., GYM
Thompson T. W.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Thomhill G. D.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
Toeks W. B.	PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204
Toomey D.	OUTER SOLAR SYSTEM, Thu. p.m., GYM
Törmänen T.	VENUS TECTONICS, Mon. p.m., Rm. 104
Tozzi G. P.	ASTEROIDS, Thu. a.m., GYM
Tralli D.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Treiman A. H.	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
Trombka J. I.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
Tryka K. A.	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
	Teuchiya A.
	Teuchiya A.
	Tuniz C.
	Turpin L.
	Tuttle M. J.
	Tuzzolino A. J.
	Ulyanov A. A.
	Uyeda C.
	van Fossen M.
	Vaniman D. T.
	Vaughan D. F.
	Veeder G. J.
	Vempati R. K.
	Verchovsky A. B.
	Veter S. K.
	Veverka J.
	Vickery A. M.
	Viles F.
	Viles F.
	Virag A.
	Virag A.
	Vogel J. S.
	Vogt S.
	Wagner R.
	Wagner R.
	Wagstaff J.
	Walden B.
	Walker D.
	Walker R. J.
	Walker R. J.
	Walker R. M.
	Wal S. D.
	Walton D. R. M.
	Walzebuck J.
	Wang J.
	Wang M.
	Wänke H.
	Wänke H.
	Warren J.
	Warren P. H.
	Warren P. H.
	CHONDRULES AND CHONDRITES, Mon. p.m., GYM
	REFRACTORY INCLUSIONS, Tue. p.m., GYM
	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	REFRACTORY INCLUSIONS, Tue. p.m., GYM
	REFRACTORY INCLUSIONS, Tue. p.m., GYM
	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
	MARS: REMOTE SENSING II, Tue. a.m., GYM
	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206
	OUTER SOLAR SYSTEM, Thu. p.m., GYM
	MARS: REMOTE SENSING II, Tue. a.m., GYM
	INTERSTELLAR GRAINS, Mon. a.m., GYM
	LUNAR HIGHLANDS, Thu. a.m., Rm. 204
	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
	IMPACT MODELS AND EXPERIMENTS, Thu. p.m., Rm. 206
	ASTEROIDS, Thu. a.m., GYM
	SPACE EXPLORATION INITIATIVE, Thu. p.m., Rm. 104
	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
	REFRACTORY INCLUSIONS, Tue. p.m., GYM
	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
	COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204
	MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104
	PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104
	LUNAR MARE BASALTS, Thu. p.m., Rm. 204
	LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204
	SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204
	IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204
	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
	INTERSTELLAR GRAINS, Mon. a.m., GYM
	VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104
	INTERSTELLAR GRAINS, Mon. a.m., GYM
	TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104
	REFRACTORY INCLUSIONS, Tue. p.m., GYM
	PHOBOS, Fri. a.m., GYM
	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
	MARS: CHANNELS AND WATER, Wed. a.m., GYM
	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
	BASALTIC LUNAR METEORITES, Tue. a.m., Rm. 204
	LUNAR HIGHLANDS, Thu. a.m., Rm. 204

- Warren P. H.  
Wasserburg G. J.  
Wasserburg G. J.  
Wasserburg G. J.  
Wasserburg G. J.  
Wasserman L. H.  
Wasson J. T.  
Wasson J. T.  
Wasson J. T.  
Watson L. L.  
Watters T. R.  
Watters T. R.  
Weidenachilling S. J.  
Weidie A. E.  
Weinbruch S.  
Weinstein S. A.  
Weirup D.  
Weisberg M. K.  
Weisberg M. K.  
Weissman P. R.  
Weitz C.  
Wendt H. R.  
Wetherow S. J.  
Wetherill G.W.  
Whelan J. T.  
Whipple K. X.  
Whitford-Stark J. L.  
Whitlock R.  
Wichman R. W.  
Wieler R.  
Wieler R.  
Wiens R. C.  
Wiesmann H.  
Wiesmann H.  
Wiesmann H.  
Wiesmann H.  
Wiles C. R.  
Williams D. A.  
Williams D. B.  
Williams D. R.  
Williams R. S. Jr.  
Williams S. H.
- SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
ASTEROIDS, Thu. a.m., GYM  
CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
TERRESTRIAL IMPACT STRUCTURES, Wed. a.m., Rm. 104  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
VENUS TECTONICS, Mon. p.m., Rm. 104  
COSMIC DUST I, Tue. a.m., Rm. 206  
CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
INTERSTELLAR GRAINS, Mon. a.m., GYM  
SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
N AND S ISOTOPES, Fri. a.m., Rm. 206  
COSMIC RAYS AND SOLAR WIND, Fri. a.m., Rm. 204  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
LUNAR MARE BASALTS, Thu. p.m., Rm. 204  
ROCKS: A TO HED, Wed. a.m., Rm. 206  
SOLAR NEBULA PHY. & CHEM., Thu. a.m., Rm. 206  
VENUS: VOLCANISM AND CRATERING, Tue. a.m., Rm. 104  
MARS GEOLOGY, Wed. p.m., Rm. 104  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
VENUS TECTONICS, Mon. p.m., Rm. 104  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
MARS GEOLOGY, Wed. p.m., Rm. 104
- Williams S. H.  
Wills E. L.  
Wilson L.  
Wilson L.  
Winters R.R.  
Wineborn F.  
Wlotzka F.  
Wlotzka F.  
Wolfe H.  
Wolfe R. F.  
Wood J. A.  
Wood J. A.  
Wright I. P.  
Wright I. P.  
Wu S. S. C.  
Wulf A. V.  
Xiao X.  
Yamamoto T.  
Yamori A.  
Yanagisawa M.  
Yanai K.  
Yang H.  
Yang V.  
Yokoyama Y.  
York C.  
Yoshimizu J.  
Young C. E.  
Young L. A.  
Yuen D. A.  
Yuen G. U.  
Zachos J. C.  
Zaitseva S. Ye.  
Zanda B.  
Zappalà V.  
Zent A. P.  
Zhang J.  
Zharkov A. V.  
Zimbelman J. R.  
Zimbelman J. R.  
Zimbelman J. R.  
Zimbelman J. R.
- MARS: CHANNELS AND WATER, Wed. a.m., GYM  
REMOTE SENSING AND INSTRUMENTATION, Fri. a.m., Rm. 206  
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MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
CHONDRULES AND CHONORITES, Mon. p.m., GYM  
PLANETARY DIFFERENTIATION, Mon. p.m., Rm. 204  
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MAGELLAN AT VENUS, Mon. a.m., Rm. 104  
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SNCs, UREILITES AND MAC88177, Tue. p.m., Rm. 204  
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CHONDRULES AND CHONORITES, Mon. p.m., GYM  
CHONDRULES AND CHONDrites, Mon. p.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
ASTEROIDS, Thu. a.m., GYM  
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IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
LUNAR HIGHLANDS, Thu. a.m., Rm. 204  
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LUNAR RESOURCE UTILIZATION, Tue. a.m., Rm. 204  
MOONVIEWS: FROM GALILEO..., Tue. p.m., Rm. 104  
REFRACTORY INCLUSIONS, Tue. p.m., GYM  
OUTER SOLAR SYSTEM, Thu. p.m., GYM  
VENUS TECTONICS, Mon. p.m., Rm. 104  
CARBONACEOUS CHONDrites, Thu. p.m., Rm. 104  
TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
CARBONACEOUS CHONORITES, Thu. p.m., Rm. 104  
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MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104  
IRONS AND MESOSIDERITES, Wed. p.m., Rm. 204  
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MARS: CHANNELS AND WATER, Wed. a.m., GYM  
MARS: REMOTE SENSING I, Mon. p.m., Rm. 206  
PLANETARY GEOLOGICAL PROCESSES, Fri. a.m., Rm. 104  
MARS: REMOTE SENSING II, Tue. a.m., GYM

Zinner E. K.	FROM INTERSTELLAR GRAINS TO ASTEROIDS, WED. P.M., GYM
Zinner E. K.	INTERSTELLAR GRAINS, Mon. a.m., GYM
Zinner E. K.	REFRACTORY INCLUSIONS, Tue. p.m., GYM
Zinner E. K.	ROCKS: A TO HED, Wed. a.m., Rm. 206
Zisk S. H.	MARS GEOLOGY, Wed. p.m., Rm. 104
Zisk S. H.	MARS: REMOTE SENSING II, Tue. a.m., GYM
Zolensky M. E.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Zolensky M. E.	COSMIC DUST I, Tue. a.m., Rm. 206
Zolensky M. E.	CARBONACEOUS CHONDRITES, Thu. p.m., Rm. 104
Zolensky M. E.	TERRESTRIAL IMPACTS: CHEM. & MINERAL., Wed. p.m., Rm. 206
Zook H. A.	COSMIC DUST II AND COMETS, Tue. p.m., Rm. 206
Zuber M. T.	MARS: TECTONICS, GEOPHYSICS, ..., Thu. a.m., Rm. 104
Zurek R.	MARS: REMOTE SENSING I, Mon. p.m., Rm. 206



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