LUNAR SCIENCE INFORMATION BULLETIN

Universities Space Research Association

NUMBER 8 Lunar Science Institute December 15, 1975

3303 NASA Road #1
Houston, TX 77058
713/488-5200

NASA HEADQUARTERS PROGRAM OFFICES REALIGNED

Dr. James C. Fletcher, NASA Administrator, announced that the Launch Vehicle and Propulsion Program in the Office of Space Science will be transferred to the Office of Space Flight (formerly Office of Manned Space Flight), and the NASA Directorate for Life Sciences will be transferred to the Office of Space Science.

An organization chart of the Office of Space Science showing positions and new mail codes is published on page 12 of this Bulletin.

A number of changes have occurred in the newly merged Lunar and Planetary Programs Office. Some of these include Dr. Bevan M. French, formerly of National Science Foundation, to Program Chief, Extraterrestrial Materials Research Program (includes both meteorite and lunar sample research), and Mr. Floyd Roberson, formerly Acting Deputy Director, Lunar Programs Office, to Deputy Director, Solar Terrestrial Programs Division. Dr. John H. Pomeroy has left NASA to accept a position as Senior Staff Officer (Executive Secretary) of the Committee on Radioactive Waste Management of the Board of Energy Studies in the Commission on Natural Resources, National Academy of Sciences/National Research Council.

DR. BRUCE MURRAY HEADS JPL

Dr. Bruce C. Murray, widely known planetary scientist and authority on Mars, Mercury and Venus, has been appointed Director of the Jet Propulsion Laboratory (JPL) to succeed Dr. William H. Pickering, who is retiring after 21 years in that position. Caltech professor of planetary science and a geologist by training, Dr. Murray has been a researcher with JPL space missions for more than 10 years and with planetary science at Caltech for 15 years. The appointment will become effective after the first of the year. JPL is operated for NASA by Caltech.

NEWS FROM TASS, SOVIET PRESS AGENCY

Dr. A. P. Vinogradov, geochemist and vice-president of the Soviet Academy of Sciences died November 16, 1975, at the age of 80. The Soviet Union's study of cosmochemistry was developed under the leadership of Dr. Vinogradov. He remained active as the head of Moscow's Institute of Geochemistry and Analytical Chemistry until his death.

Anatoly Alexandrov, head of the Kurchatov Institute of Atomic Energy was elected president of the Academy of Sciences, the Soviet Union's leading scientific body, on Tuesday, November 25, 1975. He replaces Vladimir Kotelnikov, who has been acting president since last May.

PROPOSAL REVIEW

The Lunar Science Review Panel (LSRP) met October 25 - November 2, 1975 at the Lunar Science Institute to review approximately 250 proposals on all aspects of lunar science. The evaluations and recommendations, conducted by twenty-five scientists, were forwarded to NASA on November 6. Others attending the meeting were officials from NASA-Headquarters Lunar and Planetary Programs Office and from the Office of the Curator NASA-Johnson Space Center.

The scope of the review this year expanded to include proposals for the study of meteorites, geophysical data, theoretical modeling, and remote observations by many diverse methods. The next meeting of the Panel is scheduled for March 1976 immediately following the Seventh Lunar Science Conference.

Those wishing to submit proposals for review at this session should submit them to the Lunar and Planetary Programs Office, Code SL, NASA Headquarters, Washington, D.C. 20541 no later than *January 15, 1976*. For more information or to request copies of the "Dear Colleague" letter outlining the procedure for submitting the proposal contact Dr. Bevan French, Program Chief, Extra-Terrestrial Materials Research, at NASA-Headquarters. (Telephone: AC 202/755-3760)

SEVENTH LUNAR SCIENCE CONFERENCE

The Seventh Lunar Science Conference, under the joint sponsorship of the NASA-Johnson Space Center and the Lunar Science Institute will be held in Houston, March 15-19, 1976. The organization of the Conference is similar to past years but with increasing emphasis on comparisons between the moon and other planets. The Conference will consider each of the following broad, problem-oriented topics:

1 - Constraints on structure and composition of planetary interiors.
2 - Characteristics and movements of materials on lunar planetary and asteroidal surfaces.
3 - Characterization and evolution of maria and other volcanic landforms.
4 - Characterization and evolution of planetary crusts.
5 - Nature and effects of impact processes.
6 - Extraterrestrial materials as solar/interplanetary/interstellar probes.

Some important dates to remember in connection with the Conference are:

January 12	Deadline for submission of abstracts
Mid-February	Preliminary distribution of abstracts
March 15-19	Conference
April 19	Deadline for submission of manuscripts to Conference Proceedings

Questions about the Conference should be directed to Mrs. Carolyn Watkins at the Lunar Science Institute, (Telephone: AC 713/488-5200, ext. 37)

SYMPOSIUM: GEOLOGY OF THE TERRESTRIAL PLANETS: AN OVERVIEW

This symposium summarizing the advances of the past ten years in planetary geology will be held on February 24 at 3:00 p.m. as part of the American Association for the Advancement of Science (AAAS) Annual Meeting February 18-24, Boston, MA. The session is sponsored by AAAS Sections D and E. Participants and topics on the panel include: Planetary Interiors by M. Nafi Töksoz (MIT, Cambridge, MA); Impact Cratering on the Planets by Donald E. Gault (Ames Research Center, Moffett Field, CA) Tectonism and Volcanism of the Planets by Keith A. Howard (U.S.Geological Survey, Menlo Park, CA); Planetary Erosion and Transport Mechanisms, by John J. McCauley (U.S. Geological Survey, Flagstaff, AZ); and, Summary and Overview by Carl Sagan (Cornell University, Ithaca, NY)

For more information, please contact Baerbel K. Lucchitta, U.S. Geological Survey, Branch for Astrogeologic Studies, Flagstaff, AZ 86001.

CONFERENCE ON ORIGINS OF MARE BASALTS AND THEIR IMPLICATIONS FOR LUNAR REGOLITH

This conference, held at the Institute November 17-19, 1975, was attended by 110 scientists who participated in three days of extremely lively stimulating, and informative discussions. Topics included mare volcanism in space and time; remote sensing and characterization of mare deposits; ages and isotopic studies; whole rock chemistry and its constraints on source regions; mineral chemistry and petrology; cooling histories and near-surface fractionation; characterization and nature of source regions; geophysical constraints on origin and evolution of mare basalts; and comparative studies of basalts on the terrestrial planets. Abstracts supplied by those who made formal contributions were published in advance (LSI Contribution #234) and were distributed at the conference. Others can obtain copies from Mrs. Carolyn Watkins, LSI, by sending $1.00 U.S. or $6.00 foreign to cover postage and handling. It is anticipated that a summary of the conference will appear in E⊕S shortly.

CONFERENCE: SCIENTIFIC APPLICATIONS OF LUNAR LASER RANGING

A conference on "Scientific Applications of Lunar Laser Ranging" will be held at the University of Texas at Austin, 8-10 June 1976. The conference is co-sponsored by IUGG, COSPAR, and IAU. Some topics to be discussed include: Astrometry and dynamics of Earth-Moon Systems; Rotation of the Moon; Dynamical theory-tests of relativity; Implications for lunar history and internal constitution; Establishment of intercontinental reference systems; and Global tectonophysics and smaller scale crustal motions. For additional information, please contact: Mrs. Julie Strong, SALUR Local Organizing Committee, Dept. of Astronomy, University of Texas at Austin, Austin, TX 78712.

LUNAR SCIENCE CONFERENCE PROCEEDINGS

The Symposia Office of the Lunar Science Institute is now able to offer all sets of Lunar Science Conference Proceedings through the Fourth, at bookseller's cost plus postage. This offer is available to individuals, not to libraries or organizations, please. The special prices are:

Apollo 11	$40.00
Second Conference	46.00
Third Conference	58.00*
Fourth Conference	64.00

*NOTE: This price was incorrectly listed as $54.00 on the flyer given out at the Mare Basalt Conference at the Institute, November 17-19, 1975.

Send prepaid orders to Lunar Science Institute, Symposia Office, 3303 NASA Road #1, Houston, TX 77058.

MARINER 10 TV PICTURE DATA STATUS

The National Space Science Data Center (NSSDC) has published a Data Announcement Bulletin (NSSDC 75-18, October 1975) which describes the Mariner 10 TV data now available from NSSDC and explains the procedures for ordering these data. The following is a summary of the Status of the Picture Data:

Product	Availability
MTVS Picture Data (raw pictures, high-pass filtered, and vertical AGC enhancements)	NSSDC can respond to requests if roll and file number, version, and FDS count are submitted by requestor.
IPL Picture Data	NSSDC cannot respond to requests until all data are received.
Indexes to Mariner 10 TV Picture Data	NSSDC can respond to requests for 16-mm microfilm.
SEDR (Supplementary Experiment Data Records)	NSSDC will supply the complete record on one 16-mm reel of microfilm with each initial request for picture data.
MVM73 Earth/Moon Calibration Catalog on microfiche	NSSDC can respond to requests.
MVM73 Venus Encounter Catalog on microfiche	NSSDC can respond to requests.
MVM73 Mercury First Encounter Catalog on microfiche	NSSDC can respond to requests.
MVM73 Mercury Second Encounter Catalog on microfiche	NSSDC can respond to requests.
MVM73 Mercury Third Encounter Catalog on microfiche	Until the microfiche are received, NSSDC cannot respond to requests.

To obtain a copy of this Data Announcement Bulletin write NSSDC, Code 601.4, Goddard Space Flight Center, Greenbelt, MD 20771.

MORE 1:250,000 SCALE LUNAR MAPS IN THE WORKS

The "User Guide to 1:250,000 Scale Lunar Maps" published in March 1975 and available on request from the Photo/Map Library, LSI, included diagrams showing which maps were then available in this series. Since then another twenty map sheets are being prepared. Six of the twenty have been assigned names:

39C-1	Brayley	80A-3	Born	81A-4	Von Behring
63B-3	Jansky	81A-3	Kästner	83A-4	Necho

The twenty new map sheets are shown on the accompanying diagrams as bolder outlined areas.

The NASA Lunar and Planetary Programs Office has also started work on a 1:1,000,000 Lunar Map (LM) series. There are four maps currently in progress. These are areas 41, 42, 103, and 104. For more information on this program, please contact Dan Kinsler, Lunar Science Institute.

USGS LUNAR MAP REPRINTED - MARS QUADRANGLES AVAILABLE

The U.S. Geological Survey has announced the reprinting of Map I-703 *Geologic Map of the Near Side of the Moon* by D. E. Wilhelms and J. F. McCauley. Scale 1:5,000,000, accompanied by 7-page text, originally published 1971.

Two Mars quadrangle maps are now available: Map I-893 *Geologic Map of the Tharsis Quadrangle of Mars* by M. H. Carr. Lat 0° to 30° N, long 90° to 135° W. Scale 1:5,000,000 at 0° lat.; and, Map I-894 *Geologic Map of the Lunae Palus Quadrangle of Mars* by D. J. Milton. Lat 0° to 30° N, long 45° to 90° W. Scale 1:5,000,00 at 0° lat.

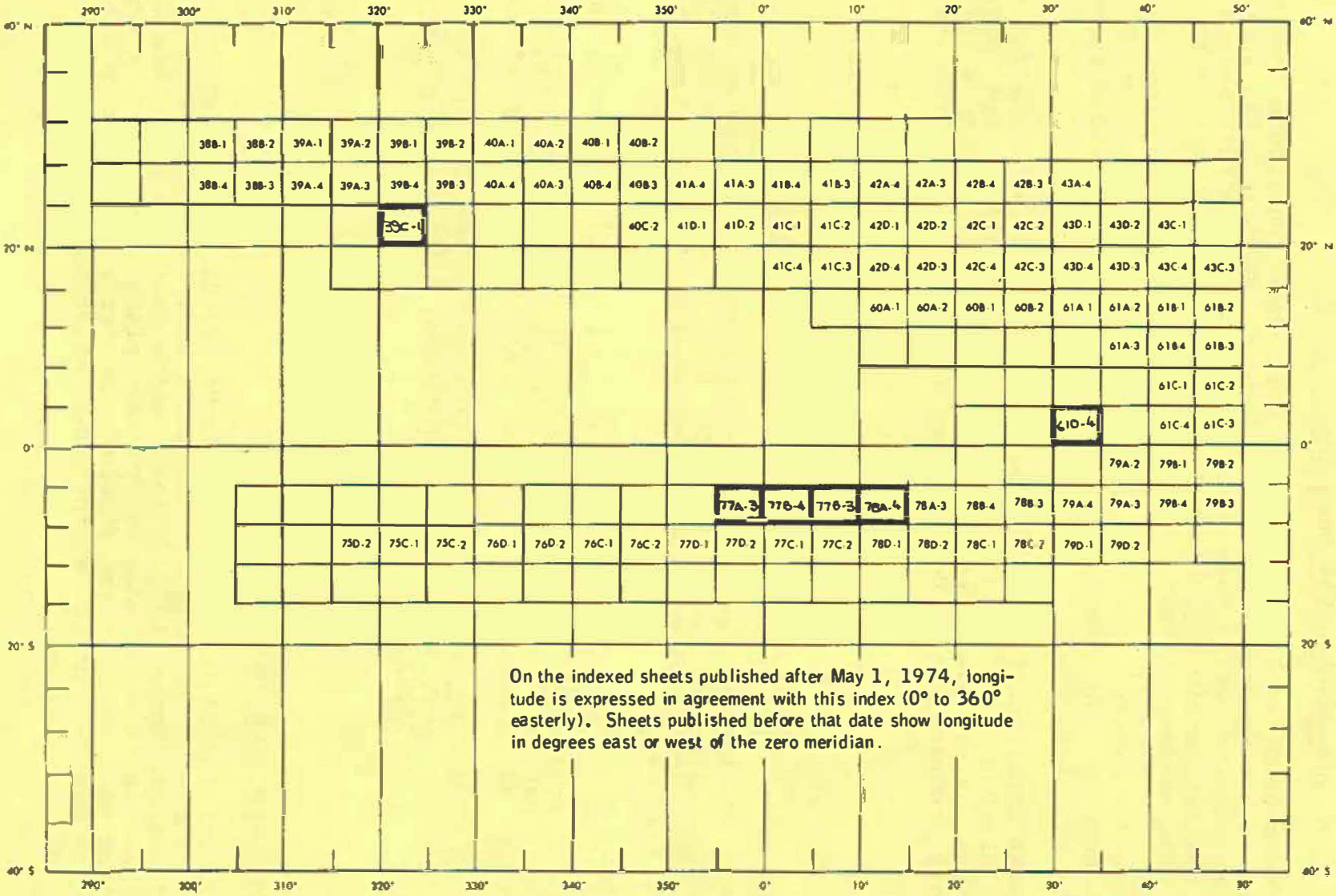
Prepaid orders for these maps ($1.00 each) should be sent to U.S. Geological Survey, Branch of Distribution, 1200 South Eads Street, Arlington, VA 22202.

SIXTH CONFERENCE PROCEEDINGS

It is anticipated that the Proceedings of the Sixth Lunar Science Conference will be mailed by the publisher, Pergamon Press, before the first of January 1976. Please watch your mail for this important work in lunar science if you have placed your order or are entitled to a set. If you should encounter any problem, please contact the Symposia Office at the Lunar Science Institute, 713/488-5200, ext. 30.

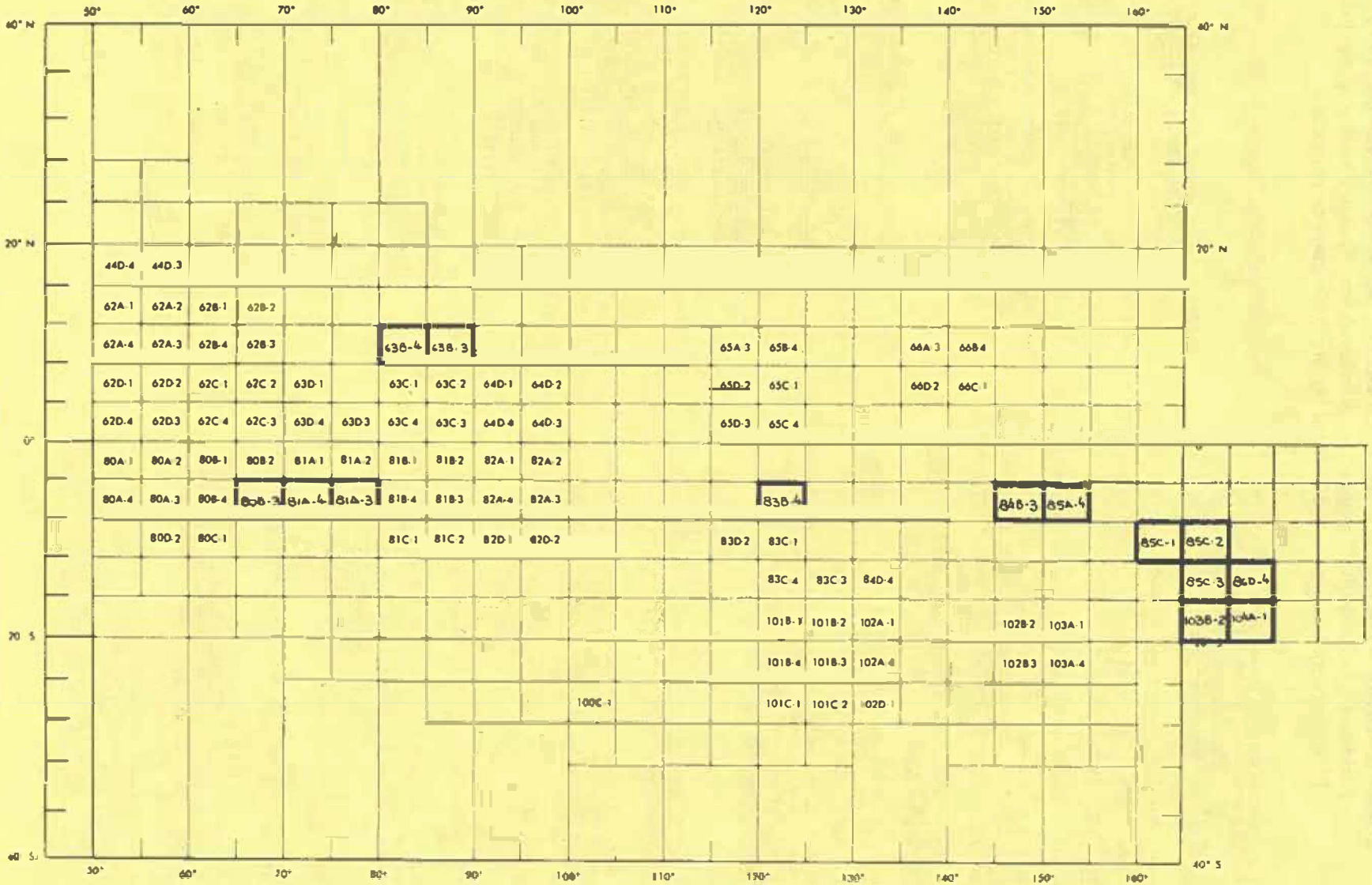
1:250,000 Scale Lunar Maps Available as of December 1975

(New maps shown in bold outlines)



1:250,000 Scale Lunar Maps Available as of December 1975

(New maps shown in bold outlines)



CURRENT LUNAR ARTICLES received in LSI Library, September-November 1975
(Address of first author is given as published for ease in obtaining reprints. Please contact author or your local library for copies or reprints.)

Adams, J.B. (Dept. of Geological Sciences, Univ. of Washington, Seattle, WA 98195), Charette, M.P.: Effects of maturation on the reflectance of the lunar regolith: Apollo 16 - a case study. THE MOON 13, 293-299. (1975)

Adams, J.B. (Dept. of Geological Sciences, Univ. of Washington, Seattle, WA 98195), Charette, M.P., Rhodes, J.M.: Chemical fractionation of the lunar regolith by impact melting. SCIENCE 190, 380-381. (1975)

Africano, J.L. (Dept. of Astronomy, Univ. of Texas at Austin 78712), Cobb, C.L., Dunham, D.W., Evans, D.S., Fekel, F.C., Vogt, S.S.: Photoelectric measurements of lunar occultations VII: further observational results. THE ASTRONOMICAL JOURNAL 80, 689-697. (1975)

Akimov, L.A.: Influence of mezorelief on brightness distribution over a planet disk. ASTRONOMICHESKII ZHURNAL 52, 635-641. (1975)

Allen, C.C. (Steward Observatory, Univ. of Arizona, Tucson, AZ 85721): Central peaks in lunar craters. THE MOON 12, 463-474. (1975)

Allen, R.O., Jr. (Chemistry Division, Argonne National Laboratory, Argonne, IL 60439), Jovanovic, S., Reed, G.W., Jr.: Heavy element affinities in Apollo 17 samples. EARTH AND PLANETARY SCIENCE LETTERS 27, 163-169. (1975)

Ammalaimiev, G.I. (Astronomy Dept., Khar'kov Univ.), Evsyukov, N.N., Litvinov, V.M.: Relation between optical and geological-morphological subdivisions of the lunar surface. SOVIET ASTRONOMY 19, 127-128. (1975)

Arnold, J.R., (Dept. of Chemistry, Univ. of Calif., San Diego, La Jolla, CA 92037): A Monte Carlo model for the gardening of the lunar regolith. THE MOON 13, 159-172. (1975)

Arvidson, R. (McDonnell Center for the Space Sciences, Washington Univ., St. Louis, MO 63130), Crozaz, G., Drozd, R.J., Hohenberg, C.M., Morgan, C.J.: Cosmic ray exposure ages of features and events at the Apollo landing sites. THE MOON 13, 259-276. (1975)

Arvidson, R. (McDonnell Center for the Space Sciences, Washington Univ., St. Louis, MO 63130), Drozd, R.J., Hohenberg, C.M., Morgan, C.J., Poupeau, G.: Horizontal transport of the regolith, modification of features, and erosion rates on the lunar surface. THE MOON 13, 67-79. (1975)

Ashbrook, J.: Some results from May's lunar eclipse. SKY AND TELESCOPE 50, 219-223. (1975)

Baldwin, R.B. (Oliver Machinery Co., Grand Rapids, MI 49504): Terrestrial and lunar accretion - mass distribution of planetesimals which formed pre-Mare craters. ASTRONOMICHESKII VESTNIK 9, 65-73. (1975)

Banerjee, S.K. (Dept. of Geology and Geophysics, Univ. of Minnesota, Minneapolis, MN 55455), Mellema, J.P.: Reply to "A note on the Magnetic Properties of Lunar Sample 15535,28 and the Implications Regarding Paleointensity Determinations," by A. Stephenson and D.W. Collinson. EARTH AND PLANETARY SCIENCE LETTERS 27, 362. (1975)

Belyaev, Y.I.: About the Mercury wind between the Continental and Maria regions of the Moon. GEOKHIMIYA 1975 (5), 768-770. (1975)

Berking, B. (Univ. Munich, Inst. Kristallog. and Mineral. Munich, West Germany): Separations of magnetite and hematite from lunar pigeonite. ZEITSCHRIFT FUR KRISTALLOGRAPHIE 141, 283-292. (1975)

Bielefeld, M.J. (Computer Science Corp., 8728 Colesville Rd., Silver Springs, MD 20910): Surface exploration by natural and prompt activation analysis exemplified by Apollo remote orbital sensing. (Abstract) TRANSACTIONS OF THE AMERICAN NUCLEAR SOCIETY 21, 9. (1975)

Brandli, H.W.: Picture of Month - Moon glint. MONTHLY WEATHER REVIEW 103, 655-656. (1975)

Brennan, W.J. (Dept. of Geological Sciences, State Univ. College, Geneseo, NY 14454): Modification of premare impact craters by volcanism and tectonism. THE MOON 12, 449-461. (1975)

Bursa, M.: Parameters of the selenopotential model and the lunar deflections of the vertical. BULLETIN OF THE ASTRONOMICAL INSTITUTE OF CZECHOSLOVAKIA 26, 140-148. (1975)

Bursa, M. (Astronomical Institute of the Czechoslovak Academy of Sciences, Praha): Higher harmonics of terrestrial and lunar gravitational-fields in the theory of the dynamics of the earth's rotation axis. BULLETIN OF THE ASTRONOMICAL INSTITUTE OF CZECHOSLOVAKIA 26, 218-234. (1975)

Cassidy, W. (Dept. of Earth & Planetary Sciences, Univ. of Pittsburgh Pittsburgh, PA 15260), Hapke, B.: Effects of darkening processes on surfaces of airless bodies. ICARUS 25, 371-383. (1975)

Chuchkov, E.A., Lyubimov, G.P., Myagchenkova, O.G., Novichkova, A.D., Pereslegina, N.V., Contor, N.N., Nikolaev, A.G.: Results of cosmic-ray intensity measurements made by Luna-19 automatic station. COSMIC RESEARCH 13, 223-232. (1975)

Church, S.E. (Dept. of Geological Sciences, Univ. of Calif., Santa Barbara, CA 93106): Radiogenic isotope research. REVIEWS OF GEOPHYSICS AND SPACE PHYSICS 13, 98-101. (1975)

Classen, J.: The interior of the Moon. VEROFFENTLICHUNGEN DER STERNWARTE PULSNITZ 10, 1-24. (1975) DIE STERNE 50, 151-158. (1974)

Cornell, J. (Harvard-Smithsonian Center for Astrophysics, Cambridge, MA 02139): The Moonwatch era ends. SKY AND TELESCOPE 50, 160-163. (1975)

Crozaz, G. (McDonnell Center for the Space Science, Washington University, St. Louis, MO 63130), Walker, R.M.: Track view of the regolithic elephant. THE MOON 13, 229-234. (1975)

Curtis, D.B. (Charles Arms Lab., Div. of Geological & Planetary Sciences, Calif. Inst. of Techn., Pasadena, CA 91125), Wasserburg, G.J.: Apollo 17 neutron stratigraphy sedimentation and mixing in the lunar regolith. THE MOON 13, 185-227. (1975)

Daily, W.D. (Dept. of Physics and Astronomy, Brigham Young Univ., Provo, UT 84602), Barker, W.A., Dyal, P., Parkin, C.W.: A model lunar ionosphere for the Moon in the geomagnetic tail. E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 909. (1975)

Drozd, R. (McDonnell Center for the Space Sciences, Washington Univ., St. Louis, MO 63130), Morgan, C.: Ages of features in the Taurus-Littrow Valley. (Abstract) E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 605. (1975)

Drozd, R. (McDonnell Center for the Space Sciences, Washington Univ., St. Louis, MO 63130), Morgan, C.: Xenon in lunar samples 14307 and 76535. (Abstract). E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 605. (1975)

Duke, M.B. (NASA/Johnson Space Center, Houston, TX 77058), Nagle, J.S.: Stratification in the lunar regolith - A preliminary view. THE MOON 13, 143-158. (1975)

Eldridge, J.S. (Oak Ridge Holifield National Lab., Oak Ridge, TN 37830), O'Kelley, G.D., Schonfeld, E.: Solar and galactic cosmic-ray activation of lunar samples. (Abstract) TRANSACTIONS OF THE AMERICAN NUCLEAR SOCIETY 21, 10. (1975)

El-Baz, F. (National Air & Space Museum, Smithsonian Institution, Washington, DC 20560): The Moon after Apollo. ICARUS 25, 495-537. (1975)

Evsyukov, N.N.: Methods of compiling albedo and color maps of the Moon. SOLAR SYSTEM RESEARCH 9, 23-27. (1975) [Translated from Astronomicheskii Vestnik 9, 29-34. (1975)]

Evsyukov, N.N. (Astronomical Obs., Khar'kov Univ.): Possibility of cartography of the complex of optical characteristics of the Moon. SOVIET ASTRONOMY 19, 242-244. (1975)

Fastie, W.G. (Johns Hopkins Univ., Physics Dept., Baltimore, MD 21218), Kerr, D.E.: Spectroradiometric calibration techniques in the far ultraviolet: a stable emission source for the lyman bands of molecular hydrogen. APPLIED OPTICS 14, 2133-2142. (1975)

Froeschle, M. (Centre d'Etudes et de Recherches Geodynamiques et Astronomiques, Grasse, France), Meyer, C.: Remarks on the utilization of lunar profiles for the reduction of observations of occultation. THE MOON 12, 475-478. (1975)

Fuller, M. (Dept. of Geological Sciences, UCSB, Santa Barbara, CA 93106), Wu, Y., Wasilewski, P.J.: The magnetic characteristics of returned lunar samples and their implications for regolith processes. THE MOON 13, 327-338. (1975)

Fuller, M.D. (Dept. of Geological Sciences, Univ. of Calif., Santa Barbara, CA 93106), Wu, Y.M.: Measurement of magnetic properties and NRM of individual lunar soil particles. E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 904. (1975)

Fuller, M.D. (Geological Sciences, Univ. of Calif. Santa Barbara, CA 93106): Possible origin of lunar magnetism. NATURE 257, 295-296. (1975)

Gammage, R.B. (Health Physics & Metals & Ceramics Div., Holifield National Lab., Oak Ridge, TN 37830), Holmes, H.F.: Specific surface area as a maturity index of lunar fines. EARTH AND PLANETARY SCIENCE LETTERS 27, 424-426. (1975)

Gapcynski, J.P. (Environmental & Space Sciences Div., NASA/Langley Research Center, Hampton, VA 23665), Blackshear, W.T., Tolson, R.H., Compton, H.R.: A determination of the lunar moment of inertia. GEOPHYSICAL RESEARCH LETTERS 2, 353-356. (1975)

Gentner, W.: Scars on the faces of celestial bodies. STERNE UND WELTRAUM 14, 114-119. (1975)

Gibson, E.K., Jr. (Geochemistry Branch, NASA/Johnson Space Center, Houston, TX 77058): Distribution, movement, and evolution of the volatile elements in the lunar regolith. THE MOON 13, 321-326. (1975)

Goel, P.S. (Dept. of Chemistry, Indian Inst. of Techn., Kanpur, Kanpur 208016, India), Shukla, P.N., Kothari, B.K., Garg, A.N.: Total nitrogen in lunar soils, breccias and rocks. GEOCHIMICA ET COSMOCHIMICA ACTA 39, 1347-1352. (1975)

Goldstein, M.L. (Lab. for Extraterrestrial Phys., NASA/Goddard Space Flight Center, Greenbelt, MD 20771): Lunar magnetism. NATURE 258, 175. (1975)

Griscom, D.L. (Material Sciences Div., Naval Res. Lab., Washington, DC 20375), Marquardt, C.L. Friebele, E.J.: Microwave resonance thermomagnetic analysis: a new method for characterizing fine-grained ferromagnetic constituents in lunar materials. JOURNAL OF GEOPHYSICAL RESEARCH 80, 2935-2946. (1975)

Hapke, B. (Dept. of Earth & Planetary Sciences, Univ. of Pittsburgh, Pittsburgh, PA 15213), Cassidy, W., Wells, E.: Effects of vapor-phase deposition processes on the optical, chemical, and magnetic properties of the lunar regolith. THE MOON 13, 339-353. (1975)

Heiken, G. (Univ. of Calif., Los Alamos Scientific Lab., Los Alamos, NM 87544): Petrology of lunar soils. REVIEWS OF GEOPHYSICS AND SPACE PHYSICS 13, 567-587. (1975)

Heymann, D. (Dept. of Geology & Space Physics, Rice Univ., Houston, TX 77001): Argon-lead isotopic correlation in samples from lunar maria: records from the ancient lunar regolith. EARTH AND PLANETARY SCIENCE LETTERS 27, 445-448. (1975)

Heymann, D. (Dept. of Geology and Space Sci., Rice Univ., Houston, TX 77001), Walton, J.R., Jordon, J.L., Lakatos, S., Yaniv, A.: Light and dark soils at the Apollo-16 landing site. THE MOON 13, 81-110. (1975)

Hirshberg, J. (High Altitude Obs., National Center for Atmospheric Research, Boulder, CO 80303): Composition of the solar wind: present and past. REVIEWS OF GEOPHYSICS AND SPACE PHYSICS 13, 1059-1063. (1975)

Hoffmann, H.J. (Max-Planck-Institut für Kernphysik, Heidelberg, Germany), Fechtig, H., Grün, E., Kissel, J.: Temporal fluctuations and anisotropy of the micrometeoroid flux in the Earth-Moon system measured by Heos 2. PLANETARY & SPACE SCIENCE 23, 985-991. (1975)

Hörz, F. (Geology & Geophysics Branch, NASA/Johnson Space Center, Houston, TX 77058), Schneider, E., Gault, D.E., Hartung, J.B., Brownlee, D.E.: Catastrophic rupture of lunar rocks: a Monte Carlo simulation. THE MOON 13, 235-258. (1975)

Hubbard, N.J., Ramendik, G.I., Gronskaya, S.I., Gubina, I.Y., Gushchin, V.N.: Investigation of soil samples of Luna-20 on a spark source mass-spectrometer. GEOKHIMIYA 1975 (6), 803-811. (1975)

Ivanov, A.V. (VI Vernadskii Geochem. & Anal. Chem. Institute, Moscow, USSR): Role of evaporation in formation of chemical composition of lunar glasses. GEOKHIMIYA 1975 (8), 1150-1155. (1975)

Jady, R.J. (Dept. of Mathematics, Univ. of Exeter, Great Britain): Upper-mantle conductivity determined by the geomagnetic lunar daily variation. PHYSICS OF THE EARTH AND PLANETARY INTERIORS 10, 377-381. (1975)

Kashkarov, L.L., Korotkova, N.N., Lavrukhina, A.K.: Relict irradiation of iron-meteorite material by low-energy heavy cosmic-ray nuclei. AKADEMIIA NAUK SSSR, DOKLADY 221, 198-200. (1975)

Keil, K. (Dept. of Geology & Institute of Meteoritics, Univ. of New Mexico, Albuquerque, NM 87131), Warner, R.D., Prinz, M., Dowty, E.: Rocks 60618 and 65785: Evidence for admixture of KREEP in lunar impact melts. GEOPHYSICAL RESEARCH LETTERS 2, 369-372. (1975)

Kennedy, G.C. (Institute of Geophysics & Planetary Physics, Univ. of California, Los Angeles, CA 90024), Higgins, G.H.: A lunar core and the Moon's magnetic field. THE MOON 12, 401-406. (1975)

Kieffer, S.W. (Dept. of Geology, Univ. of Calif., Los Angeles, CA 90024): From regolith to rock by shock. THE MOON 13, 301-320. (1975)

Kisliuk, V.S.: Improved determination of the zeta coordinate of craters on the visible lunar hemisphere from survey data of the Zond 8 spacecraft. KOSMICHESKIE ISSLEDOVANIIA 13, 415-422. (1975)

Kliment, V., Vandlik, T., Sasnar, V.: Use of 14 MeV neutrons for activation analysis of oxygen in Luna-16 regolith. (Abstract) GEOCHEMISTRY INTERNATIONAL 11, 1106. (1975)

Kolachek, B. (Warsaw Polytech. Univ., Warsaw, Poland), Rogovski, E.: Determination of selenodetic coordinates and parameters of Moon rotating movements from lunar-surface from measurements of zenith distances. ASTRONOMICHESKII ZHURNAL 52, 867-874. (1975)

Komen, G.G. (P.K. Shternberg State Astronomical Institute, Moscow): One form of the differential equations of motion for an artificial satellite of the Moon. SOVIET ASTRONOMY 19, 129-130. (1975)

Kozlov, I.S.: Interpretation and application of problem of 4 fixed centers. ASTRONOMICHESKII ZHURNAL 52, 649-656. (1975)

Lally, J.S. (U.S. Steel Research Lab., Monroeville, PA 15146), Heuer, A.H., Nord, G.L., Jr., Christie, J.M.: Subsolidus reactions in lunar pyroxenes: an electron petrographic study. CONTRIBUTIONS TO MINERALOGY AND PETROLOGY 51, 263-281. (1975)

Lambeck, K. (Institut de Physique du Globe and Dept. des Sciences de la Terre, Université de Paris, Paris, France): Effects of tidal dissipation in the oceans on the Moon's orbit and the Earth's rotation. JOURNAL OF GEOPHYSICAL RESEARCH 80, 2917-2925. (1975)

Langford, J.I.: Powder studies of lunar soils. (Abstract). ACTA CRYSTALLOGRAPHICA SECTION A 31, S201. (1975)

Lindsay, J.F. (Marine Science Institute, Univ. of Texas, Galveston, TX 77550), Srnka, L.J.: Galactic dust lanes and lunar soil. NATURE 257, 776-777. (1975)

Lowman, P.D. (NASA/Goddard Space Flight Center, Greenbelt, MD 20771): Apollo program -- was it worth it. FORENSIC QUARTERLY 49, 291-302. (1975)

Malcuit, R.J. (Dept. of Geology, Denison Univ., Granville, OH 43023), Winters, R.R., Mickelson, M.E., Larson, L.E.: Angular momentum constraints on lunar accretion and implications for lunar origin. (Abstract). EOS: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 605. (1975)

Mason, C.C. (Associates for Planetary Research, 1910 Seakale Lane, Houston, TX 77058): Experimental petrology of lunar highland basalt composition and applications to models for the lunar interior: a discussion. JOURNAL OF GEOLOGY 83, 663-664. (1975)

Maxwell, T.A. (Dept. of Geology & Geophysics, Univ. of Utah, Salt Lake City, UT 84112), El-Baz, F., Ward, S.H.: Distribution, morphology, and origin of ridges and arches in Mare Serenitatis. GEOLOGICAL SOCIETY OF AMERICA BULLETIN 86, 1273-1278. (1975)

McCoy, J.E. (NASA/Johnson Space Center, Houston, TX 77058), Lin, R.P., McGuire, R.E., Chase, L.M., Anderson, K.A.: Magnetotail electric fields observed from lunar orbit. JOURNAL OF GEOPHYSICAL RESEARCH 80, 3217-3224. (1975)

Mendell, W.W. (NASA/Johnson Space Center, Houston, TX 77058), McKay, D.S.: A lunar soil evolution model. THE MOON 13, 285-292. (1975)

Mints, R.I. (SM Kirov Polytech Institute, Sverdlovski, USSR), Petukhova, T.M., Grokhovskii, V.I., Shaldybin, V.P.: Metallography of a lunar iron fragment taken from Moon by Soviet probe Luna-20. METAL SCIENCE AND HEAT TREATMENT 17, 1-4. (1975)

Mints, R.I. (SM Kirov Polytech Institute, Sverdlovski, USSR), Krivopishina, E.V., Petukhova, T.M.: Thermodiffusive and deformation-shift elements of lunar iron structure. GEOKHIMIYA 1975 (7), 1007-1012. (1975)

Mints, R.I. (SM Kirov Polytech Inst., Sverdlovski, USSR), Petukhova, T.M., Segal, V.M., Tarasov, L.S.: Widmanstatten ferrite in lunar iron. METAL SCIENCE AND HEAT TREATMENT 16, 644-646. (1975)

Morris, R.V. (Code TN7, NASA/Johnson Space Center, Houston, TX 77058), Gibbons, R.V., Hörz, F.: FMR thermomagnetic studies up to 900°C of lunar soils and potential magnetic analogues. GEOPHYSICAL RESEARCH LETTERS 2, 461-464. (1975)

Murthy, V.R. (Dept. of Geology and Geophysics, Univ. of Minnesota, Minneapolis, MN 55455): The source and origin of the exotic component and KREEP-rich materials on the Moon. THE MOON 13, 111-119. (1975)

Nakamura, Y. (Marine Science Institute, Univ. of Texas, Galveston, TX 77550), Dorman, J., Duennebier, F., Lammlein, D., Latham, G.: Shallow lunar structure determined from the passive seismic experiment. THE MOON 13, 57-66. (1975)

Oberbeck, V.R. (NASA/Ames Research Center, Moffett Field, CA 94035), Morrison, R.H., Hörz, F.: Transport and emplacement of crater and basin deposits. THE MOON 13, 9-26. (1975)

Pacer, R.A. (Univ. of Kentucky, Lexington, KY 40506), Ehmann, W.D.: The Apollo missions and the chemistry of the Moon. JOURNAL OF CHEMICAL EDUCATION 52, 350-356. (1975)

Pai, S.I., Hsieh, T.: Shock wave relations in lunar ash flow. ZEITSCHRIFT FÜR ANGEWANDTE MATHEMATIK UND MECHANIK 55, 243-256. (1975)

Parkin, C.W. (Dept. of Physics, Univ. of Santa Clara, Santa Clara, CA 95053), Daily, W.D., Dyal, P.: Relative magnetic permeability and iron abundance of the Moon. E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 904. (1975)

Pesek, I. (Astronomical and Geophysical Obs. of the Czech Technical Univ., Praha, Czechoslovakia): On the possibility of the use of circumzenithal in lunar astrometry. BULLETIN OF THE ASTRONOMICAL INSTITUTE OF CZECHOSLOVAKIA 26, 234-237. (1975)

Poupeau, G. (McDonnell Center for the Space Sciences, Washington Univ. St. Louis, MO 63130), Walker, R.M., Zinner, E., Morrison, D.: The microcrater- and cosmic ray track-record in single crystals from lunar soils. E⊕S: TRANSACTIONS OF THE AMERICAN GEOPHYSICAL UNION 56, 904. (1975)

Quaide, W. (NASA/Ames Research Center, Moffett Field, CA 94035), Oberbeck, V.: Development of the Mare regolith: some model considerations. THE MOON 13, 27-55. (1975)

Raheim, A. (Institute of Advanced Studies, Australian National Univ., Canberra 2600, Australia), Green, D.H.: Experimental petrology of lunar highland basalt composition and applications to models for the lunar interior: a reply. JOURNAL OF GEOLOGY 83, 665. (1975)

Raine, W.L. (Teledyne Brown Engineering, Huntsville, AL 35812), Fountain, W.F., Fountain, J.A., Segewitz, M.W., Van Swearingen, J., White, M.K.: Thermal study of the unilluminated surface of the waning Moon. THE MOON 12, 407-447. (1975)

Roth, L.E., (California Inst. of Technology, Jet Propulsion Lab., Pasadena, CA 91125), Elachi, C.: Coherent electromagnetic losses by scattering from volume inhomogeneities, Technical note. IEEE TRANSACTIONS ON ANTENNAS AND PROPAGATION 23, 674-675. (1975)

Runcorn, S.K. (Inst. of Lunar & Planetary Science, Univ. of Newcastle upon Tyne): Lunar magnetism: Runcorn replies. NATURE 258, 175-176. (1975)

Runcorn, S.K. (Inst. of Lunar & Planetary Science, Dept. of Geophysics & Planetary Physics, School of Physics, Univ. of Newcastle upon Tyne, Newcastle upon Tyne (Great Britain): On the interpretation of lunar magnetism. PHYSICS OF THE EARTH AND PLANETARY INTERIORS 10, 327-335. (1975)

Schneider, E. (Max-Planck-Institut fur Kernphysik, Heidelberg, F.R.G.): Impact ejecta exceeding lunar escape velocity. THE MOON 13, 173-184. (1975)

Shull, C.W. (Supervisory Cartographer, Defense Mapping Agency Topographic Center, Washington, DC 20315): Mapping for lunar data analysis. IN: AMERICAN SOCIETY OF PHOTOGRAMMETRY, 41st ANNUAL MEETING, WASHINGTON, DC, MARCH 9-14, 1975, 505-512. (1975)

Silverberg, E.C. (Univ. of Texas, McDonald Obs., Austin, TX 78712): Report on the lunar ranging at McDonald Observatory for the period June 7, 1975 to October 5, 1975. Univ. of Texas at Austin, Research Memorandum No. 75-009, 13 pp. (1975)

Sonett, C.P. (Dept. of Planetary Science & Lunar & Planetary Lab., Univ. of Arizon, Tucson, AZ 85721), Duba, A.: Lunar temperature and global heat flux from laboratory electrical conductivity and lunar magnetometer data. NATURE 258, 118-121. (1975)

Sonett, C.P. (Dept. of Planetary Sciences, Lunar & Planetary Lab., Univ. of Arizona, Tucson, AZ 85721): Solar-wind induction and lunar conductivity. PHYSICS OF THE EARTH AND PLANETARY INTERIORS 10, 313-322. (1975)

Srnka, L.J. (Lunar Science Institute, Houston, TX 77058): Sheath-limited unipolar induction in the solar wind. ASTROPHYSICS AND SPACE SCIENCE 36, 177-204. (1975)

Stephenson, A. (Inst. of Lunar & Planetary Sciences, School of Physics, The University, Newcastle upon Tyne, Great Britain), Collinson, D.W.: A note on the magnetic properties of lunar sample 15535,28 and the implications regarding palaeointensity determinations. EARTH AND PLANETARY SCIENCE LETTERS 27, 360-361. (1975)

Surkov, Y.A. (Vernadskiy Institute of Geochemistry & Analytical Chemistry, Academy of Sciences of the USSR, Moscow), Shandor, V.V., Toporov, Y.P., Vdovykin, G.P.: The thermal desorption products from lunar soil. GEOCHEMISTRY INTERNATIONAL 11, 1054-1059. (1975)

Tykva, R.: Determination of primary and cosmogenic radionuclides in a sample of lunar soil returned by automatic station Luna-20. (Technical Note). GEOKHIMIYA 1975 (7), 1097-1099. (1975)

Taylor, H.P., Jr. (Div. of Geological & Planetary Sciences, California Inst. of Technology, Pasadena, CA 91125): Stable isotope geochemistry. REVIEWS OF GEOPHYSICS AND SPACE PHYSICS 13, 102-107. (1975)

Uhlmann, D.R. (Dept. of Metallurgy and Materials Science, Center for Materials Science & Engineering, Massachusetts Inst. of Tech., Cambridge, MA 02139), Klein, L., Hopper, R.W.: Sintering, crystallization, and breccia formation. THE MOON 13, 277-284. (1975)

Van Bemmelen, R.W.: Berlage's accretion model of lunar origin and its geochemical consequences. I. Communicated by Prof. W.P. DeRoever. PROCEEDINGS OF THE KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN SERIES B. PHYSICAL SCIENCES 78, 168-178. (1975)

Van Bemmelen, R.W.: Berlage's accretion model of lunar origin and its geochemical consequences. II. Communicated by Prof. W.P. DeRoever. PROCEEDINGS OF THE KONINKLIJKE NEDERLANDSE AKADEMIE VAN WETENSCHAPPEN SERIES B. PHYSICAL SCIENCES 78, 179-187. (1975)

Wagner, F. (Zent. Institute Phys. Erde. Jena, East Germany): Character of elastic-waves in lunar rock samples. ZEITSCHRIFT FUR ANGEWANDTE GEOLOGIE 21, 336-338. (1975)

Walker, D. (Center for Earth & Planetary Physics, Hoffman Lab., Harvard Univ., Cambridge, MA 02138), Longhi, J., Stolpher, E.M., Grove, T.L., Hays, J.F.: Origin of titaniferous lunar basalts. GEOCHIMICA ET COSMOCHIMICA ACTA 39, 1219-1235. (1975)

Waranius, F.B. (Lunar Science Institute, 3303 NASA Road 1, Houston, TX 77058), Heiken, J.H.: Lunar data information center: a shortcut to the riddle of the Moon. SPECIAL LIBRARIES 66, 407-410. (1975)

Wasson, J.T. (Dept. of Chemistry, Univ. of Calif., Los Angeles, CA 90024), Boynton, W.V., Chou, C.L., Baedecker, P.A.: Compositional evidence regarding the influx of interplanetary materials onto the lunar surface. THE MOON 13, 121-141. (1975)

Wasson, J.T. (Inst. of Geophysics & Planetary Physics, Univ. of Calif., Los Angeles, CA 90024), Chou, C.L., Robinson, K.L., Baedecker, P.A.: Siderophiles and volatiles in Apollo-16 rocks and soils. GEOCHIMICA ET COSMOCHIMICA ACTA 39, 1475-1485. (1975)

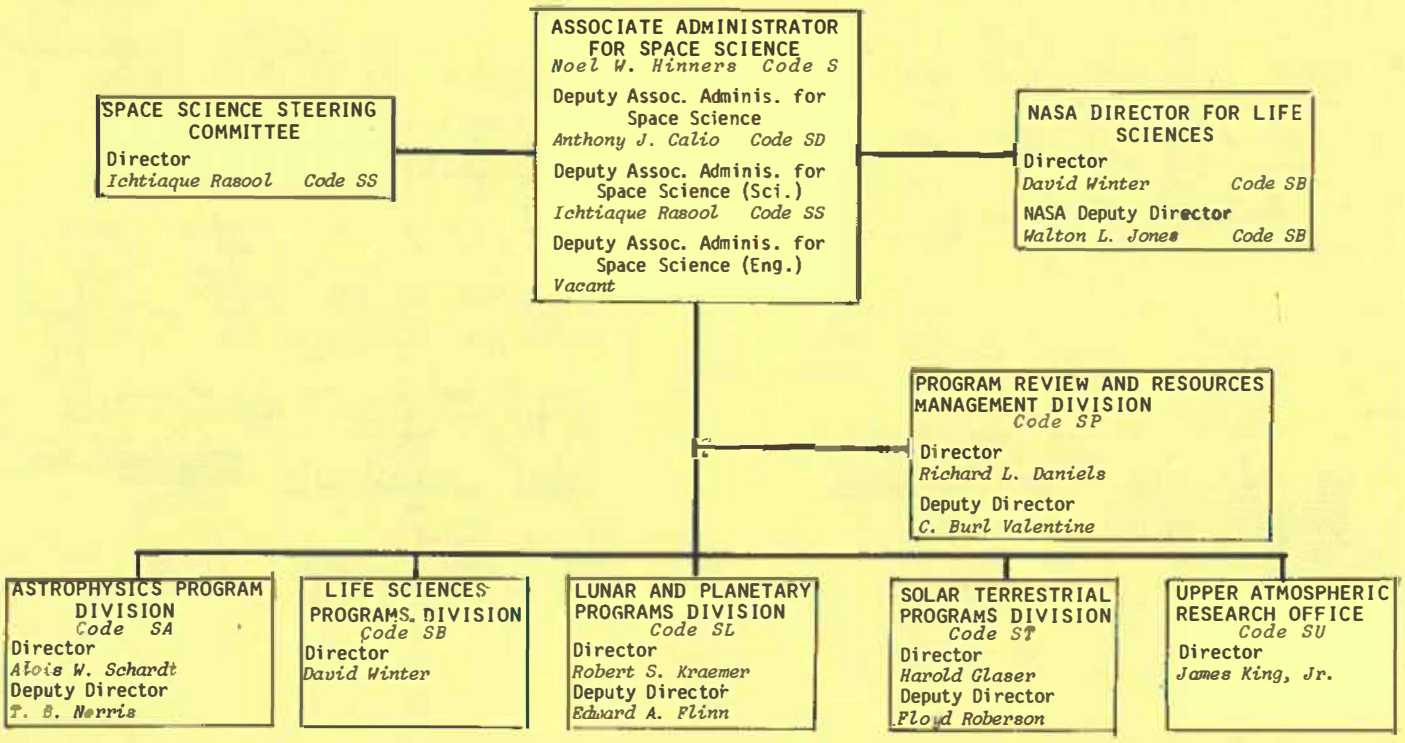
Wood, J.A. (Smithsonian Astrophysical Observatory, 60 Garden Street, Cambridge, MA 02138): The Moon. SCIENTIFIC AMERICAN 233, 92-102. (1975)

Yuhas, D.E. (Washington Univ., St. Louis, MO): The particle track record in lunar silicates Long-term behavior of solar and galactic VH nuclei and lunar surface dynamics. Ph.D. Thesis, 282 pp. (1974) Available from: University Microfilms Order #75-6627.

Zaitsev, V.N., Kurbasov, V.V., Kutsenko, A.V., Lypkan, N.M., Polosyants, B.A.: Automated complex of an apparatus for signal receiving and processing during laser location of Moon. EXPERIMENTAL INSTRUMENTS AND TECHNIQUES 1975 78-80. (1975)

NASA Headquarters Program Offices Realigned (Continued from Page 1)

OFFICE OF SPACE SCIENCE



Reprinted from NASA NMI 1137.1
Change 2, Attachment A

CALENDAR

January 12	Deadline for submission of abstracts to 7th Lunar Science Conference.
January 13	Deadline for receipt of abstracts for American Geophysical Union Spring Annual Meeting. See E⊕S 56, 895-898, Nov. 1975 for information.
February 18-24	American Association for the Advancement of Science Annual Meeting, "Science and Our Expectations: The Bicentennial and Beyond," Boston, MA. Contact: AAAS, Meeting Office 1776 Massachusetts Avenue N.W. Washington, DC 20036 For GSA participation contact: Dr. Sheldon Judson Department of Geological and Geophysical Sciences Princeton University Princeton, NJ 08540 or Dr. Bruce B. Hanshaw U.S.G.S. 431 National Center Reston, VA 22092
February 24	Geology of the Terrestrial Planets: an Overview Special Symposium at AAAS Meeting, Boston, MA. See page 3 this Bulletin for information.
March 15-19	Seventh Annual Lunar Science Conference, Houston, TX. See page 2 this Bulletin for information.
March 28-April 2	American Astronomical Society, Division for Planetary Science, Annual Meeting, Austin, TX. Contact: Dr. Harlan Smith Director, McDonald Observatory University of Texas at Austin Austin, TX 78712
April 12-16	American Geophysical Union, 1976 Spring Annual Meeting, Sheraton-Park Hotel, Washington, DC. For Program Chairman, see E⊕S 56, 898, Nov. 1975, or contact: American Geophysical Union Suite 1000 1909 K Street N.W. Washington, DC 20036

NASA-JSC