

Science and Change: Hopes and Dilemmas

Denver, a growing metropolis in the foothills of the majestic Rockies, is the site for the 143rd national meeting of the AAAS; this our next Annual Meeting, 20-25 February 1977, is to be held in conjunction with the 53rd annual meeting of the Southwestern and Rocky Mountain Division of the AAAS.

Beginning with an evening lecture on Sunday, 20 February, and continuing for the next 5 days, there will be 10 public lectures and 123 symposia (averaging about 17 simultaneous sessions) on the various aspects of science, technology, and the public issues they impact upon, focusing on the theme: *Science and Change: Hopes and Dilemmas*, a topic of increasing importance as we move into our third century.

In addition to our technical program, which is listed in the next several pages, we will again have an exhibit of scientific instruments and publications, *SCIENCE INTERNATIONAL*, the *Science Film Festival*, and, through the efforts of the Denver Advisory Committee, chaired by Maurice B. Mitchell (Chancellor of the University of Denver) and John A. McKinney (President of Johns-Manville Corporation), a stimulating set of tours and cultural happenings.

All in all, we modestly believe that we have prepared a truly magnificent scientific and cultural experience for you in an equally magnificent setting. Come and join us; registration forms will be found on page 606, and don't forget to avail yourself of the post-meeting possibilities which the Rockies afford, as mentioned on page 608.

—ARTHUR HERSCHMAN

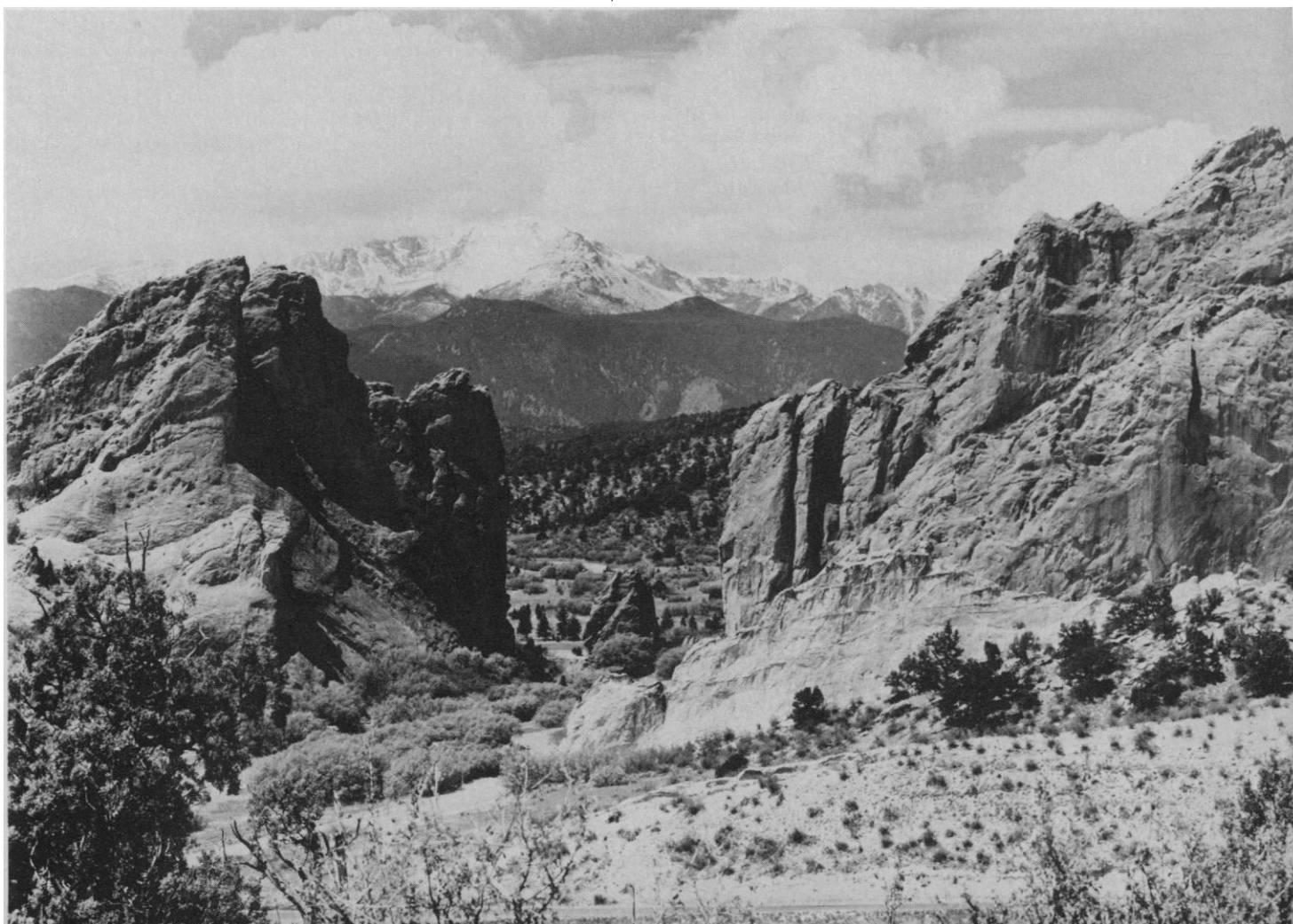


Annual Meeting
Denver

20-25 February 1977

For further details see the following pages
in this issue.

Pikes Peak, Colorado



Meeting Information

Listed below are the Denver hotels which are used by the AAAS for housing and/or program activities during the Annual Meeting. (The two letters in parentheses are the codes that identify session locations in the preliminary program.)

Denver Hilton (DH): Symposia and Public Lectures; Registration, Information, and Ticket Desks; Message Center; Welcome Center (hospitality); Resource Center for the Disabled; Student Hospitality Center; *SCIENCE INTERNATIONAL* (exhibits); *Science Film Festival*; Headquarters Office; Newsroom; Business Meetings.

Holiday Inn—Downtown (HI): Symposia; Business Meetings.

Cosmopolitan (CO): Symposia; Workshops on Minorities in Science; Business Meetings.

Executive Tower Inn: Meeting of the AAAS Southwestern and Rocky Mountain (SWARM) Division; Contributed Paper (Poster and Slide) Sessions [detailed information on these activities will be published at a later date]; Registration Desk; AAAS Office and Information Center.

Brown Palace: Housing only.

All the above facilities are located in the downtown area of Denver (for precise locations see map on page 608). Most are within walking distance from one another, but special AAAS shuttle buses will be operated between all hotels.

Registration

Meeting attendees are encouraged to register in advance to obtain a detailed preview of the symposia, lectures, special events, and other activities scheduled during the Meeting. Registration fees are listed on the Registration Form on page 606 in this issue. Please note that special 1-day attendance registration is available on site at the Meeting Registration Desks at \$10 (regular) and \$5 (student).

Program, badge, and condensed program (foldout) will be mailed to advance registrants on or about 20 January 1977.

On-site Registration Desks will be located in the Denver Hilton (Convention Lobby) and the Executive Tower Inn (Third Floor). Registration hours are as follows:

Sunday, 20 February 2:00 p.m. to 6:00 p.m.
(*Denver Hilton only*)
Monday through Thursday,
21–24 February 8:00 a.m. to 6:00 p.m.
Friday, 25 February 8:00 a.m. to 12 noon
(*Denver Hilton only*)

Registration Refunds

The AAAS will refund advance registration fees for all cancellations received in writing or by telegram prior to 14 February 1977. NO REFUNDS WILL BE MADE ON CANCELLATION NOTICES RECEIVED AFTER THIS DATE. Refunds will be mailed from the AAAS Offices in Washington, following the Annual Meeting.

Tax Deduction for Educational Expenses

Please note that U.S. Treasury Regulation § 1.162-5 permits an income tax deduction for educational expenses (registration fees, and cost of travel, meals, and lodging) undertaken to: (1) maintain or improve skills required in one's employment or other trade or business, or (2) meet express requirements of an employer or a law imposed as a condition to retention of employment, job status, or rate of compensation. This is true even for education which leads to a degree.

Housing

In cooperation with the AAAS, the five Denver hotels used for housing and/or meetings have set aside—at guaran-

teed reduced rates—blocks of guestrooms for attendees of the Annual Meeting. The Reservation Form on page 607 of this issue lists the participating hotels and their rates. **These rates are guaranteed only when reservations are made through the AAAS Housing Bureau on the official Reservation Form prior to 4 February 1977.**

Hotel rooms are assigned on a first-come, first-served basis. Persons submitting their housing requests late cannot be guaranteed assignment of rooms at the hotel of their choice or at the requested rates. If the room rate specified is no longer available, the next available higher rate will be assigned. If the first choice hotel specified is no longer available, the Housing Bureau will make every effort to assign the second choice requested. Confirmation will come to you directly from the hotel. You should notify the hotel directly of any changes in your reservation. Room assignments will be delayed if any information is omitted from the form.

On request, the hotels will accommodate additional persons in guestrooms (e.g., three persons in a double or twin room). Charges per additional person vary between \$5 and \$10 per night, depending on the hotel; charges for rollaway beds and cots vary between \$2 and \$10, depending on the hotel. The Holiday Inn, Executive Tower Inn, and Brown Palace accommodate children under age 12 free of charge in same room with parents. The Cosmopolitan's age limit is 18; the Denver Hilton does not set any age limit.

Resources for Disabled Attendees

The AAAS, in cooperation with the Denver Advisory Committee, is once again making every effort to make the Annual Meeting fully accessible to disabled individuals. In addition to hotel rooms which can accommodate wheelchairs, and accessible meeting areas, the following resources will be available:

- A Resource Center staffed with volunteers to offer assistance on request as part of the hospitality and registration center.
- Shuttle service between meeting hotels in buses or vans equipped with lifts for wheelchairs.
- Transportation service to and from airport, train, and bus stations.
- Interpreters (sign language and oral) at all Public Lectures, and for other sessions on request.
- Repair service for wheelchairs.
- Round-the-clock telephone service responding to emergency needs.
- Special tour and sightseeing information for disabled persons.

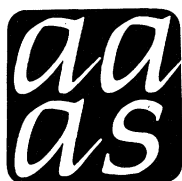
The Denver Advisory Committee is making a special effort to ensure that every aspect of the Meeting is barrier-free. Persons needing special hotel accommodations, interpreting services, or other assistance are strongly urged to so indicate on the advance registration and hotel reservation forms. Early response will help us to plan and serve you better. For additional information or suggestions, contact *Martha Redden or Wayne Schwandt, Project on the Handicapped in Science, AAAS, 1776 Massachusetts Avenue, NW, Washington, D.C. 20036 (Phone: 202-467-4497).*

Child Care Services

For meeting attendees who require babysitters for infants and small children, or companion care for children 8 years and up, we have obtained the services of **Columbine Sitters (Phone: 303/722-8364)**. The agency is open seven days a week, 9:00 a.m. through 9:00 p.m.; 24 hours' notice is requested.

Rates: Initial \$1 fee plus \$6.50 for the first three hours (includes transportation); \$1.50 for every subsequent hour. All sitters are licensed, bonded, and over age 21.

—ELISABETH ZEUSCHEL



Annual Meeting
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Preliminary Program

Science and Change: Hopes and Dilemmas

Public Lectures

- **National Geographic Society Public Lecture (20 Feb., 8:30 p.m., DH).**
Douglas W. Schwartz (Director, School of American Research, Santa Fe, N.M.).
The Rio Grande's Pueblo Past.
- **Co-Chairmen's Public Lecture (21 Feb., 1:45 p.m., DH).**
Richard Lamm (Governor of Colorado).
The Environment and Public Policy.
- **AAAS Public Lecture (21 Feb., 8:30 p.m., DH).**
Lewis Thomas (President, Memorial Sloan-Kettering Cancer Center, New York, N.Y.).
Biomedical Science and Human Health: The Long-Range Prospects.
- **AAAS Public Lecture (22 Feb., 1:45 p.m., DH).**
Mary F. Berry (Chancellor, University of Colorado, Boulder).
Funding University Research: It's Worth the Fight.
- **AAAS Public Lecture (22 Feb., 8:30 p.m., DH).**
John A. Eddy (Astronomer, High Altitude Observatory, National Center for Atmospheric Research, Boulder).
Astronomy and the American Indian.
- **George Sarton Memorial Public Lecture (23 Feb., 1:45 p.m., DH).**
Jane M. Oppenheimer (William R. Kenan, Jr. Professor of the History of Science, Bryn Mawr College).
A Biologist Looks at History.
- **AAAS Retiring President's Public Lecture (23 Feb., 8:30 p.m., DH).**
William D. McElroy (Chancellor, University of California at San Diego).
Basic and Problem-Oriented Research: A New Emphasis.
- **Phi Beta Kappa Public Lecture (24 Feb., 1:45 p.m., DH).**
June Goodfield (Visiting Professor, Rockefeller University, New York, N.Y.).
Humanity in Science: A Perspective and a Plea.

- **John Wesley Powell Memorial Public Lecture (24 Feb., 8:30 p.m., DH).**
William A. Dick-Peddie (Professor of Biology, New Mexico State University, Las Cruces).
Safeguarding Our National Diversity: The Role of Scientists.
- **AAAS Public Lecture (25 Feb., 1:45 p.m., DH).**
Peter L. Auer (Professor, Sibley School of Mechanical and Aerospace Engineering, Cornell University).
Fusion Power—Its Promises and Prospects.

1. General Interest

- **Case Studies in Scientific Freedom and Responsibility (21 Feb., DH).** Arranged by William A. Blanpied (National Science Foundation) and Rosemary A. Chalk (American Association for the Advancement of Science).
- **Technical and Legal Aspects of Weather Modification (22 Feb., DH).** Arranged by Lewis O. Grant (Colorado State University) and Ray J. Davis (University of Arizona).
- **Science: The Key to Our Political Future (22 Feb., DH).** Arranged by Ian MacGregor (AMAX Corporation).
- **The Viking Missions to Mars (22 and 23 Feb., DH).** Arranged by Carl Sagan (Cornell University) and Gerald A. Soffen (NASA Langley Research Center).
- **The Frontiers of the Natural Sciences (24 Feb., DH).** Arranged by Rolk M. Sinclair (National Science Foundation).
- **The Right to Die (25 Feb., DH).** Arranged by Ernan McMullin (University of Notre Dame).

2. Physical and Mathematical Sciences

- **The Promise of High Energy Physics (21 Feb., DH).** Arranged by Victor F. Weisskopf (Massachusetts Institute of Technology).
- **The New Solar Physics (21 Feb., DH).** Arranged by John A.

HOTEL CODES: Denver Hilton DH; Holiday Inn HI; Cosmopolitan CO.

Eddy (High Altitude Observatory, Boulder, Colo., and Center for Astrophysics, Harvard University).

- **Science for the Naked Eye: Or the Physics of Everyday Experience, IV (22 Feb., DH).** Arranged by Rolf M. Sinclair (National Science Foundation).
- **Action and Reaction: Science and Mathematics (23 Feb., DH).** Arranged by Daniel J. Sterling (Colorado College).
- **Quality Mathematical Software (23 Feb., DH).** Arranged by Cleve B. Moler (University of New Mexico, Albuquerque).
- **Statistical Problems in the Remote Sensing of Meteorological Parameters (24 Feb., DH).** Arranged by David S. Crosby (American University).
- **Synchrotron Radiation—A Bright Light for the Biological and Physical Sciences (24 Feb., DH).** Arranged by Richard E. Watson and Morris L. Perlman (Brookhaven National Laboratory).
- **Laser Chemistry (25 Feb., DH).** Arranged by W. Carl Lineberger (University of Colorado, Boulder).

3. Energy

- **Wind Energy Conversion Systems [WECS] (21 Feb., DH).** Arranged by Frances J. Laner (Rockwell International, Golden, Colo.).
- **Geophysical Exploration for Energy and Mineral Reserves (21 Feb., DH).** Arranged by Franklyn K. Levin (Exxon Production Research Company, Houston, Tex.).
- **Solar Energy in the 20th Century (22 Feb., DH).** Arranged by George W. Morgenthaler (Martin Marietta Aerospace, Baltimore, Md.) and Frances J. Laner.
- **The Geologists' Role in the Nuclear Power Cycle (22 Feb., DH).** Arranged by H. R. Wynne-Edwards (University of British Columbia) and Bruce B. Hanshaw (U.S. Geological Survey, Reston, Va.).
- **Renewable Energy Resources and Rural Life in the Developing World (23 Feb., DH).** Arranged by Norman L. Brown (Energy Research and Development Administration, Washington, D.C.).
- **Nuclear Energy Politics and International Consequences (24 Feb., DH).** Arranged by Valerie A. Dalski (Westinghouse Electric Corporation, Pittsburgh, Pa.).
- **Nuclear Power and Nuclear Weapons (25 Feb., DH).** Arranged by Rolf M. Sinclair (National Science Foundation).
- **The Fusion Program (25 Feb., DH).** Arranged by Rolf M. Sinclair.

4. Resource Policy

- **Policy-Planning for Recreational Land Use in the Rockies (21 Feb., DH).** Arranged by Theodore W. Schlie (Denver Research Institute) and Russell W. Fitch (U.S. Federal Council, Denver).
- **Information Credibility and the Mineral Policy Process (21**

Feb., DH). Arranged by John G. Welles (Colorado School of Mines).

- **Energy Conservation: A National Quid Pro Quo (21 Feb., DH).** Arranged by John R. Craig and Donald E. Cunningham (Denver Research Institute).
- **Energy Development in the Rocky Mountain West (22 Feb., DH).** Arranged by Jerrold H. Krenz (University of Colorado, Boulder) and Don L. Boyer (University of Wyoming).
- **Energy from the Rockies: Fueling the Nation or Fouling the States? (23 Feb., CO).** Arranged by Thomas L. Wright (American Association of Petroleum Geologists).
- **The Impact of Energy Development on Indian Lands (23 Feb., DH).** Arranged by Tillie Walker (Denver Research Institute).
- **Applied Policy Research: A Review of Energy Resource Development in the Western United States (24 Feb., DH).** Arranged by Irvin L. White (University of Oklahoma, Norman).
- **Conflict in Management of Public Domain in the West (25 Feb., DH).** Arranged by Arnold J. Silverman (University of Montana).

5. Biological Science

- **Herbivore-Secondary Plant Metabolite Interactions (21 Feb., DH).** Arranged by Gerald A. Rosenthal (University of Kentucky).
- **Physiological Reactions in Plants Initiated by Environmental Stress (21 Feb., DH).** Arranged by M. N. Christiansen (U.S. Department of Agriculture, Beltsville, Md.).
- **Polar Research: To the Present and the Future (22 Feb., DH).** Arranged by M. A. McWhinnie (De Paul University).
- **Design of Cell Organelles (23 Feb., DH).** Arranged by Ellen Roter Dirksen (University of California, Los Angeles).
- **Science Information—International Communication for Research in Biomedicine (23 Feb., DH).** Arranged by Arthur W. Elias (BioSciences Information Service, Philadelphia, Pa.).
- **Some Mathematical Questions in Biology (24 and 25 Feb., DH).** Arranged by Simon A. Levin (Cornell University).
- **When Biologists and Mathematicians Work Together: A New Theoretical Biology (25 Feb., DH).** Arranged by Charles F. Walter (University of Houston) and Daniel L. Solomon (Cornell University).

6. Agriculture and Ecology

- **Biology and Agriculture in the People's Republic of China (21 Feb., DH).** Arranged by Arthur Kelman (University of Wisconsin, Madison).
- **World Food, Pest Losses, and the Environment (22 Feb., DH).** Arranged by David Pimentel (Cornell University).
- **Coyotes, Wildlife, and Meat Production (23 Feb., DH).** Ar-

ranged by Clair E. Terrill (U.S. Department of Agriculture, Beltsville, Md.).

- **The EQ Index for Wildlife: Blueprint for Survival (23 Feb., DH).** Arranged by Donald J. Zinn (University of Rhode Island).
- **Renewable Resource Management in Agriculture and Forestry (24 Feb., DH).** Arranged by James S. Bethel (University of Washington) and Martin A. Massengale (University of Nebraska, Lincoln).
- **High Altitude Geocology (25 Feb., DH).** Arranged by Patrick J. Webber (University of Colorado, Boulder).

7. Environment

- **How Well Are We Equipped to Cope with Environmental Problems? (21 Feb., HI).** Arranged by Lynton K. Caldwell and Toufiq A. Siddiqi (Indiana University, Bloomington), and William J. Snodgrass (McMaster University, Hamilton, Ont.).
- **Benefit-Cost Analysis and Environmental Decisions: Viable Decision Tool or Economist's Pipe Dream? (22 Feb., HI).** Arranged by Michael D. Yokell (University of California, Berkeley).
- **Nature and Government (23 Feb., HI).** Arranged by Millard C. Davis (American Nature Study Society).
- **The Measurement of Air Pollution (23 Feb., DH).** Arranged by William S. Cleveland (Bell Laboratories, Murray Hill, N.J.).
- **Weather and Geochemistry of the Urban Environment: Processes and Impacts—So What! (23 Feb., HI).** Arranged by Richard G. Semonin (Illinois State Water Survey, Urbana).
- **Societal and Technical Aspects of Denver Area Air Pollution (24 Feb., HI).** Arranged by E. F. Danielsen and C. S. Kiang (National Center for Atmospheric Research, Boulder, Colo.).
- **Regional Air Pollution: Truth and Consequences (25 Feb., HI).** Arranged by William W. Kellogg (National Center for Atmospheric Research, Boulder, Colo.).
- **Environmental Mediation Case Studies (25 Feb., HI).** Arranged by Laura M. Lake (University of California, Los Angeles).

8. Arid Lands

- **American Droughts (21 Feb., DH).** Arranged by Norman J. Rosenberg (University of Nebraska, Lincoln).
- **Scientific Activities Relating to United Nations Conferences: The UN Conference on Desertification, September 1977 (21 Feb., DH).** Arranged by Harold Dregne (Texas Tech University) and Priscilla Reining (American Association for the Advancement of Science).
- **Desert Dust: Origin, Characteristics, and Effect on Man (22 and 23 Feb., DH).** Arranged by Troy L. Péwé (Arizona State University).

- **The Reclamation of Disturbed Arid Lands (23 and 24 Feb., DH).** Arranged by Robert A. Wright (West Texas State University).
- **Social and Technological Management in Dry Lands: Past and Present; Indigenous and Imposed (25 Feb., DH).** Arranged by Nancie Gonzalez (National Science Foundation) and Anthony Leeds (Boston University).

9. Medicine and Health

- **Health Services for Rural Areas (21 Feb., HI).** Arranged by Bond L. Bible (American Medical Association, Chicago).
- **Mechanisms of Orofacial Motor Control: Masticatory and Speech Functions (21 Feb., HI).** Arranged by James H. Abbs (University of Wisconsin, Madison).
- **Behavioral Research in Medicine and Health: Careers and Training (22 Feb., HI).** Arranged by Pamela C. Ebert (National Research Council) and William Bevan (Duke University).
- **Organ Transplantation and Tumor Immunity (22 Feb., HI).** Arranged by Charles W. Putnam and Thomas E. Starzl (University of Colorado Medical Center, Denver), and Ariel C. Hollinshead (George Washington University Medical Ctr.).
- **Financial Incentives Promoting Practice in Underserved Areas—Do They Work? (23 Feb., HI).** Arranged by Ellen P. Sax (National Health Council, New York, N.Y.).
- **Medical Decision-Making (23 Feb., HI).** Arranged by John A. Swets (Bolt Beranek & Newman, Inc.) and Harvey V. Fineberg (Harvard School of Public Health).
- **Pharmacokinetics—Implications for Patient Care (23 Feb., HI).** Arranged by Raymond Jang (University of British Columbia).
- **Scientific Information and Public Policy Regulating the Use of Psychotropic Drugs (24 Feb., HI).** Arranged by James Bosco and Stanley Robin (Western Michigan University, Kalamazoo).
- **Health Goals and Health Indicators (24 Feb., HI).** Arranged by Jack Elinson (Columbia University) and Anne M. Hudson (University of Delaware).
- **Perinatal Factors and Developmental Hazards (24 Feb., HI).** Arranged by Frances D. Horowitz (University of Kansas, Lawrence).
- **Continuing Evaluation of the Use of Fluorides (25 Feb., HI).** Arranged by Erling Johansen and Donald R. Taves (University of Rochester School of Medicine and Dentistry).

10. Anthropology

- **An Account of the Visual Mode: Man versus Ape (21 Feb., DH).** Arranged by Fred C. C. Peng (State University of New York at Buffalo).
- **Effects of Early Experience in Human and Nonhuman Primates (22 Feb., DH).** Arranged by Phyllis Dolhinow (University of California, Berkeley).

- **Differences in Nutritional Requirements Among and Within Human Populations: Their Significance (22 Feb., DH).** Arranged by Irving I. Gottesman (University of Minnesota, Minneapolis).
- **Ethnoscience in Native America (23 Feb., DH).** Arranged by Rayna Green (American Association for the Advancement of Science).
- **Migration: New Directions and Policy in America (24 Feb., DH).** Arranged by Edwin H. Carpenter (University of Arizona) and Vincent H. Whitney (University of Pennsylvania).
- **Administration of Fertility Control Programs: A Fourth Dimension (24 Feb., DH).** Arranged by Nirmala Narula (The Pathfinder Fund, Chestnut Hill, Mass.).
- **Frontiers of Folklore (25 Feb., DH).** Arranged by William R. Bascom (University of California, Berkeley).
- **American Mountain People (25 Feb., DH).** Arranged by Stuart M. Leiderman (Environmental Response, Steelville, Mo.).
- **Values of Screening and Assessment for Early Intervention in the Management of the Special-Needs Child (22 Feb., HI).** Arranged by Selchuk T. Sahin (University of Massachusetts, Amherst).
- **Found: Long-Term Gains from Early Intervention (23 Feb., HI).** Arranged by Bernard Brown (Office of Child Development, Washington, D.C.).
- **Toward the Human Use of Human Beings: A Cybernetic Approach to the Assessment of Children (23 Feb., HI).** Arranged by Mark N. Ozer (George Washington University School of Medicine).
- **Families Across the Life Cycle: Issues and Perspectives (24 Feb., HI).** Arranged by Helen K. Grace (University of Illinois College of Nursing, Chicago).
- **Encounter Groups and Social Change (24 Feb., HI).** Arranged by Kurt Back (Duke University).
- **Somatosensory Experiences in Infancy and Childhood: Implications for Later Development (24 Feb., HI).** Arranged by Betty P. Broadhurst (Colorado State University, Fort Collins).

11. Technological Implications

- **Indigenous Scientific and Technological Research in Developing Countries: Where, How Much, What Kind, What Directions? (21 Feb., HI).** Arranged by Dilmus James (University of Texas, El Paso) and Allen Jedlicka (University of Northern Iowa).
- **To What Extent Can Appropriate Technology Really Enhance Freedom and the Quality of Life (22 Feb., HI).** Arranged by Craig Decker (Massachusetts Institute of Technology).
- **Beyond Gutenberg: Communication Without Paper? (23 Feb., HI).** Arranged by Harold E. Bamford, Jr. (National Science Foundation).
- **Hand-Held Calculators—Trends and Impacts (23 Feb., HI).** Arranged by Thomas N. Pyke, Jr. (National Bureau of Standards).
- **The Consequences of Reduced Building Ventilation (25 Feb., HI).** Arranged by Charles M. Hunt (National Bureau of Standards).
- **Political and Social Aspects of Remote Sensing from Space (25 Feb., HI).** Arranged by George A. Rabchevsky (American Society of Photogrammetry).

12. Behavioral Science

- **Psychoanalytic Research: The Naturalistic and the Experimental Behavioral Science Methods (21 Feb., HI).** Arranged by Norman D. Tabachnick (Sepulveda Veterans Administration Hospital, Sepulveda, Calif.).
- **Creativity (21 Feb., HI).** Arranged by Eileen Sullivan and Milton Christian (University of Florida).
- **Individual Differences, Cognition, and Learning (22 Feb., HI).** Arranged by Wilbert J. McKeachie (University of Michigan, Ann Arbor).

13. Education

- **Research Techniques and Reports by High School Science Students (21 Feb., CO).** Arranged by Frank W. Starr (Waterloo Community Schools, Waterloo, Iowa).
- **Minorities, Women, and the Handicapped in Science: Programs that Work (21 and 22 Feb., CO; and 23 Feb., DH).** Arranged by Shirley Mahaley Malcom and Janet Welsh Brown (American Association for the Advancement of Science) and Mary Budd Rowe (University of Florida).
- **Multidisciplinary Training in Science (23 Feb., CO).** Arranged by David Pimentel (Cornell University).
- **Fungibility: A New Dimension in Biological Curricula (24 Feb., CO).** Arranged by Richard Trumbull (American Institute of Biological Sciences).
- **Implications of Changeover to Metric Measurements (24 Feb., CO).** Arranged by Frances J. Laner (Rockwell International, Golden, Colo.).
- **Public Knowledge of Science—The National Assessment of Educational Progress [NAEP] (25 Feb., CO).** Arranged by Ezra Glaser (Falls Church, Va.) and Robert C. Larson (National Assessment of Educational Progress, Denver).
- **Science, Technology, Policy, and Values: The Interface with Engineering (25 Feb., CO).** Arranged by Kan Chen (University of Michigan, Ann Arbor) and Robert P. Morgan (Washington University, St. Louis).

14. Economic and Social Sciences

- **Prospects for, and Patterns of, Future U.S. Economic Growth (21 Feb., HI).** Arranged by Robert D. Hamrin (Joint Eco-

conomic Committee, Washington, D.C.) and S. Fred Singer (University of Virginia, Charlottesville).

- **National and International Cooperation: The Institutional Limit to Growth? (22 Feb., HI).** Arranged by Stephen H. Schneider and C. S. Kiang (National Center for Atmospheric Research, Boulder).
- **Can Research Institutions Accommodate Interdisciplinary Researchers? (22 Feb., HI).** Arranged by Stephen H. Schneider and Michael H. Glantz (National Center for Atmospheric Research, Boulder).
- **Technological Change, Progress or Retrogression: Private Benefit versus Social Cost (23 Feb., HI).** Arranged by Manoucher Parvin (Fordham University).
- **Environmental Issues and the Social and Behavioral Sciences (24 Feb., HI).** Arranged by Irwin Altman (University of Utah).
- **Covert Discrimination and Women in the Sciences (25 Feb., HI).** Arranged by Judith A. Ramaley (University of Nebraska School of Medicine, Omaha).

15. Science and Public Policy

- **Federal Funds for Research: Who Gets What, When, and How? (21 Feb., HI).** Arranged by T. Dixon Long (Case Western Reserve University).
- **Why Run Scared? (21 Feb., HI).** Arranged by Homer J. Hall (American Institute of Chemists).
- **Emerging National and International Policy on Information (22 Feb., HI).** Arranged by L. B. Heilprin (University of Maryland), E. B. Adams (George Washington University), A. A. Aines (National Science Foundation), and George Chacko (University of Southern California).
- **Science and Engineering Fellows in Congress: Four Years of Experience (22 Feb., HI).** Arranged by Richard A. Scribner (American Association for the Advancement of Science).
- **Adapting Science to Public Problem Solving: Problems and Potentials (23 Feb., HI).** Arranged by Rosemary A. Chalk and Richard A. Scribner (American Association for the Advancement of Science).
- **Judgment and Choice in Public Policy Decisions (23 Feb., HI).** Arranged by Kenneth R. Hammond (University of Colorado, Boulder).
- **The Utilization of Social Science Information by Congress (24 Feb., HI).** Arranged by Lawrence Froman (Staff Member, Committee on Labor and Public Welfare, U.S. Senate) and C. P. Wolf (City University of New York).
- **Utilization of Scientific Knowledge in Planning and Implementing Public Policy (24 Feb., HI).** Arranged by Donald C. Pelz (University of Michigan, Ann Arbor).
- **Energy Analysis: A New Public Policy Tool (25 Feb., HI).** Arranged by Martha W. Gilliland (University of Oklahoma, Norman).

16. History and Philosophy of Science

- **Technology and Public Policy: A Retrospective View (21 Feb., DH).** Arranged by Joel D. Goldhar (National Science Foundation), David Bearman (American Philosophical Society Library, Philadelphia), and Joel A. Tarr (Carnegie-Mellon University).
- **Two Martian Centenaries: The Real Moons and the Illusory Canals of Mars (21 Feb., DH).** Arranged by Carl Sagan (Cornell University) and Richard Berendzen (American University).
- **Contemporary Religious Movements in America: Religious Minorities in a Secular Society (22 Feb., DH).** Arranged by Gillian Lindt (Columbia University).
- **Solutions to Problems Encountered in Running an Academy of Science (22 Feb., CO).** Arranged by Lauren C. Gilman (University of Miami, Coral Gables, Fla.).
- **New Light on Newton: To Honor the 250th Anniversary of His Death (23 Feb., DH).** Arranged by Ernan McMullin (University of Notre Dame).
- **The Epistemic Status of Human Emotions (24 Feb., DH).** Arranged by Anthony Leeds (Boston University).
- **The Many Faces of Information Science (25 Feb., DH).** Arranged by Edward C. Weiss (National Science Foundation).
- **The General Systems Paradigm: Model for a Changing Science (25 Feb., CO).** Arranged by Heinz Von Foerster (Society for General Systems Research).
- **Race, Sex, and the Maturing of Social Theory (25 Feb., DH).** Arranged by Eleanor Leacock (City University of New York).

NOTE: See Registration and Housing Forms, airline and ski reservation information, and map of downtown Denver on the following three pages.



**Annual Meeting
Denver**
20-25 February 1977

**Advance
Registration Form
(A)**

ENCLOSED IS:

AAAS Member: ☐ \$20 Single Registration Fee ☐ \$30 Double Registration Fee (attendee and spouse)

Non-Member: ☐ \$25 Single Registration Fee ☐ \$35 Double Registration Fee (attendee and spouse)

Non-Member applying for AAAS membership* and meeting registration: (Annual membership dues include 52 issues of SCIENCE. Double membership—individual and spouse—includes one subscription to SCIENCE.)

☐ \$45 Single Registration and Membership (\$20 registration and \$25 dues)

☐ \$55 Double Registration and Single Membership (name of applicant _____)
(\$30 registration and \$25 dues)

☐ \$67 Double Registration and Membership (\$30 registration and \$37 dues)

Student: ☐ \$10 Single Student Registration Fee ☐ \$15 Double Registration Fee (student attendee and spouse)

*These rates apply to USA membership only. Inquire for Canadian or Foreign rates.

Note: Special one-day attendance registration is available at the Meeting Registration Desks (\$10 regular, \$5 student).

Program and badge will be mailed to each registrant in late January.

Registrations received after 30 January will be held at the AAAS Information Booth.

NAME OF REGISTRANT: _____
(Last Name) (First and Initial)

NAME OF SPOUSE REGISTRANT: _____
(Last Name) (First and Initial)

REGISTRANT'S MAILING ADDRESS: _____
[For receipt of program(s), badge(s), and SCIENCE (for new applicants)]
(Street)
(City/State) (Zip Code)

ADDITIONAL REGISTRANTS: _____
(With same mailing address. Use new form if address differs)

**REGISTRANT'S
INSTITUTION OR COMPANY:** _____
(City) (State) (Zip Code)

CONVENTION ADDRESS: _____
(Where you can be reached) (Hotel or Street Address)
Check days attending: Sun ☐ Mon ☐ Tue ☐ Wed ☐ Thu ☐ Fri ☐

☐ Please check here if you need special services due to handicap. We will contact you prior to the meeting.

**Mail to: American Association for the Advancement of Science, Dept. R,
1515 Massachusetts Ave., NW, Washington, D.C. 20005**

**SURVEY OF ATTENDEES
Annual Meeting, Denver, 20-25 February 1977**

Your answers to the following questions will help us in planning future AAAS Annual Meetings. Please complete the following form and either return it with your registration form or send in separately (to the same address) if you wish to respond anonymously (in any case, the two forms will be processed separately).

Principal Professional Interest		Principal Professional Activity		Institutional Affiliation Type	
11 <input type="checkbox"/> Physical, mathematical	21 <input type="checkbox"/> Teaching, education	31 <input type="checkbox"/> University, 4-year college			
12 <input type="checkbox"/> Biological, medical	22 <input type="checkbox"/> Health practice	32 <input type="checkbox"/> Other educational			
13 <input type="checkbox"/> Engineering	23 <input type="checkbox"/> Other practice, consulting	33 <input type="checkbox"/> Industrial, commercial			
14 <input type="checkbox"/> Social, behavioral	24 <input type="checkbox"/> Research, development	34 <input type="checkbox"/> Other private			
15 <input type="checkbox"/> Science policy	25 <input type="checkbox"/> Administration	35 <input type="checkbox"/> Government			
16 <input type="checkbox"/> (other)	26 <input type="checkbox"/> (other)	36 <input type="checkbox"/> (other)			

Highest Educational Level		Age		Distance Traveled to Meeting		Last AAAS Meeting Attended	
41 <input type="checkbox"/> Doctoral Degree	51 <input type="checkbox"/> Under 26 years	61 <input type="checkbox"/> Under 51 miles	71 <input type="checkbox"/> 1971 in Philadelphia				
42 <input type="checkbox"/> Master's Degree	52 <input type="checkbox"/> 26 to 35 years	62 <input type="checkbox"/> 51 to 100 miles	72 <input type="checkbox"/> 1972 in Washington				
43 <input type="checkbox"/> Other professional	53 <input type="checkbox"/> 36 to 45 years	63 <input type="checkbox"/> 101 to 200 miles	73 <input type="checkbox"/> 1973 in Mexico City				
44 <input type="checkbox"/> Bachelor's Degree	54 <input type="checkbox"/> 46 to 55 years	64 <input type="checkbox"/> 201 to 500 miles	74 <input type="checkbox"/> 1974 in San Francisco				
45 <input type="checkbox"/> (other)	55 <input type="checkbox"/> 56 to 65 years	65 <input type="checkbox"/> 501 to 1000 miles	75 <input type="checkbox"/> 1975 in New York				
	56 <input type="checkbox"/> Over 65 years	66 <input type="checkbox"/> Over 1000 miles	76 <input type="checkbox"/> 1976 in Boston				

Reservations

Hotel Rates*

Annual Meeting Denver

20-25 February 1977



The American Association for the Advancement of Science will hold its 1977 Annual Meeting in Denver, 20-25 February. AAAS headquarters hotel will be the Denver Hilton; the meeting of the AAAS Southwestern and Rocky Mountain Division will be at the Executive Tower Inn, with registration and information desks located at both hotels. Sessions will also be held at the Cosmopolitan and the Holiday Inn—Downtown. The following hotels will be used for housing:

Hotel	Single	Double	Twin	Suites**	Parking
DENVER HILTON (<i>Headquarters</i>)	\$22***	\$32	\$32	\$104	\$3 per 24 hours
1550 Court Place	25	35	35	and up	
(No. of rooms held: 700)	29	39	39		
EXECUTIVE TOWER INN (<i>SWARM</i>)	\$24	\$30	\$30	\$64	Free 24-hour parking for registered guests
1405 Curtis Street				and up	
(No. of rooms held: 175)					
COSMOPOLITAN	\$18	\$26	\$26	\$125	\$3 (enclosed) and \$2.50 (out-door) per 24 hrs. for registered guests
1780 Broadway				and up	
(No. of rooms held: 200)					
HOLIDAY INN—DOWNTOWN	\$21	\$26	\$26	\$45	Free for registered guests
15th Street & Glenarm Place				and up	
(No. of rooms held: 250)					
BROWN PALACE	\$34	\$41	\$41	\$65	\$2.50 per 24 hours
321 Seventeenth Street				and up	
(No. of rooms held: 50)					

*Per day; add 7.5% for State and City Room Tax. Charges for additional persons per room vary between \$5 and \$10, depending on hotel; charges for rollaway beds and cots vary between \$2 and \$10, depending on hotel. Children under age 12 accommodated free in same room with parents at Executive Tower Inn, Holiday Inn, and Brown Palace; age limit higher at Hilton and Cosmopolitan.

**Lowest available rate for one-bedroom/parlor suites; rates for larger suites available upon request.

***One hundred "mini singles" are available at the \$22 rate.

NOTE: If room rate specified is not available, the next available higher rate will be assigned. Confirmation will come to you directly from the hotel. You should notify the hotel of any changes in your reservation. Assignment is delayed if any information is omitted.

HOTEL RESERVATIONS FORM

Please type or print

Reservations received after 4 February cannot be assured.
The Housing Bureau will not accept any reservations by telephone.

CHOICE OF HOTEL: First _____ Second _____

ROOM: ☐ Single ☐ Double ☐ Twin SUITE: ☐ 1 Bedroom ☐ 2 Bedrooms Preferred Rate \$ _____

Please indicate any special housing needs due to a handicap:

ARRIVAL: Date _____ ; _____ a.m. _____ p.m. Be sure to list definite arrival and departure date and time. Hotel reservations will be held only until 6 p.m. unless otherwise specified.

DEPARTURE: Date _____ ; _____ a.m. _____ p.m.

NAMES AND ADDRESSES OF ALL OCCUPANTS OF ROOM

Name _____	Name _____
Address _____	Address _____
City _____ State _____ Zip _____	City _____ State _____ Zip _____
Name _____	Name _____
Address _____	Address _____
City _____ State _____ Zip _____	City _____ State _____ Zip _____

Hotel, confirm reservation to: _____

Mail to: AAAS Housing Bureau
225 West Colfax Avenue, Denver, Colo. 80202

SKI THE ROCKIES

800 — 323-0639

(in Illinois only: 312-569-3375)

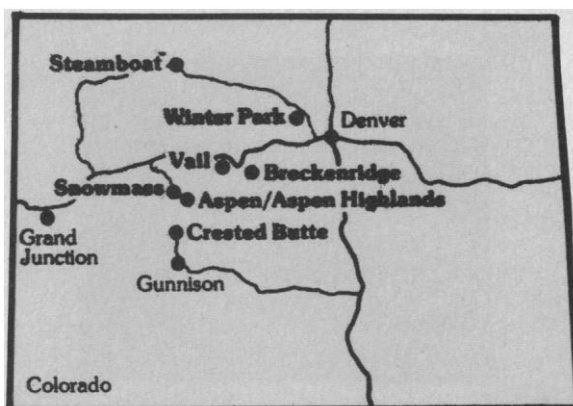


is UNITED AIRLINES special, unlisted toll-free number for those who will attend the AAAS Annual Meeting in Denver (20-25 February 1977).

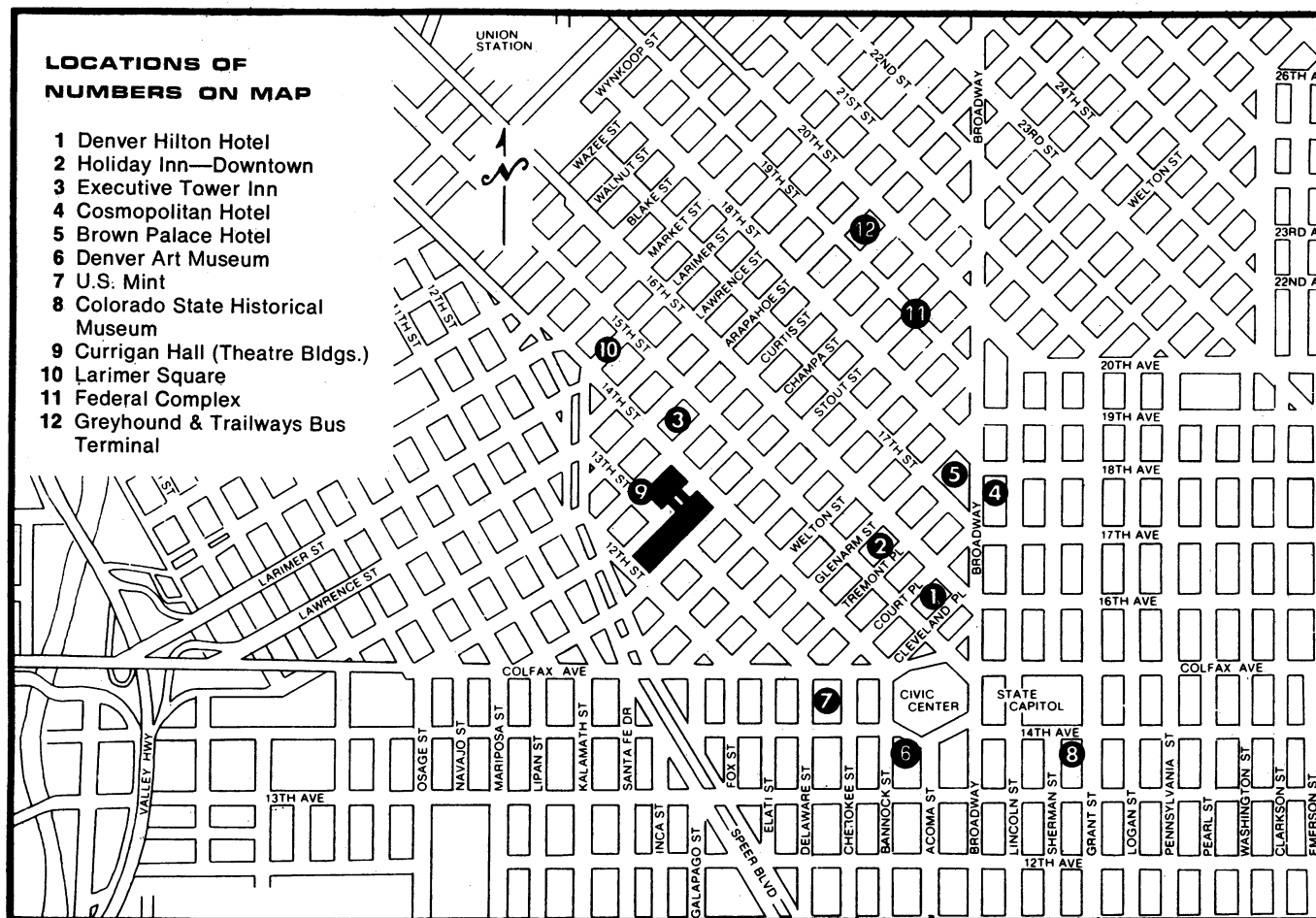
IMMEDIATE ACTION IS RECOMMENDED *

This number will bring you ski folders, reservation information, and allow you to make ski-vacation reservations along with your airline reservations to Denver through UNITED AIRLINES C.A.R.D. (Convention Assistance & Reservation Desk) service *even from cities not served by United.*

* You must act promptly because Colorado has become one of the most popular ski areas in the world, February is one of the most popular months for air travel to Denver, and the AAAS Annual Meeting dates include a popular Monday holiday (21 February). This all adds up to a crowded air-travel situation. *Don't wait to make your travel plans.*



MAKE THE MOST OF THIS YEAR'S ANNUAL MEETING IN DENVER



LOCATIONS OF NUMBERS ON MAP

- 1 Denver Hilton Hotel
- 2 Holiday Inn—Downtown
- 3 Executive Tower Inn
- 4 Cosmopolitan Hotel
- 5 Brown Palace Hotel
- 6 Denver Art Museum
- 7 U.S. Mint
- 8 Colorado State Historical Museum
- 9 Currigan Hall (Theatre Bldgs.)
- 10 Larimer Square
- 11 Federal Complex
- 12 Greyhound & Trailways Bus Terminal

Map of downtown Denver