



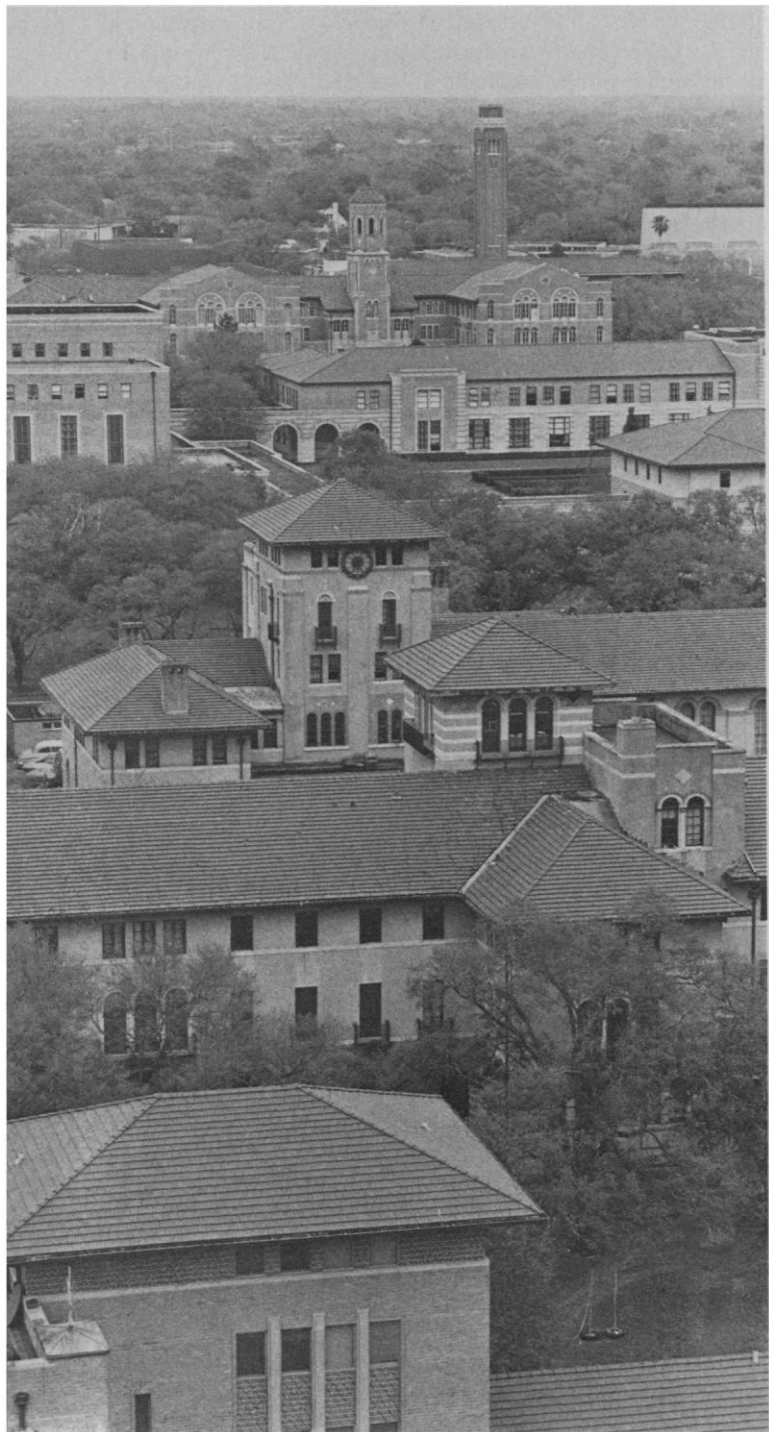
Annual Meeting Houston

3-8 January 1979

Meeting Program—Part I

Register in advance and receive a *free* 1979 AAAS Calendar with your Program; housing and registration forms can be found on pages 422 and 423. For further details, see the Preliminary Program, *Science*, 29 September, pages 1206 to 1216, and Tours and Cultural Events, *Science*, 13 October, pages 205 to 207.

HOTEL CODES: Shamrock Hilton . . . SH; Houston Marriott . . . HM



Rice University, Baker and Will Rice Residential Colleges. [Rice University]

The Association's 145th national meeting (in its 130-year history) will be held (in our new time slot, 3-8 January) in Houston. We have a full week of symposia on important scientific, technical, and policy issues in store for us, as well as public lectures, the Film Festival, an exhibit, and Poster Sessions of Contributed Papers. Truly, as we have come to expect, an intellectual feast for the cognoscenti and the curious.

Listed below are the 66 symposia in the mathematical, physical, and biological sciences. The symposia in the social and behavioral sciences, science policy, and technology will be listed in the 10 November issue. The preliminary program for the Meeting has appeared in the 29 September issue and information about tours and the Film Festival appeared in the 13 October issue.

Look over this material, as well as the material which appeared and is to appear in other issues; we are sure that you will find many things of great importance and interest to you. Plan to be with us in January; fill out and send in the housing and registration forms on pages 422 and 423 and be sure of your place at this important event (in the Sun Belt in January).

—ARTHUR HERSCHMAN

1. General Interest

Getting Into Orbit: Historical Perspectives on the American Space Program (3 Jan., 3:00 p.m., SH): Man on Mars, Skylab, space shuttle.

Roger E. Bilstein, Edward C. Ezell, William David Compton, Charles D. Benson, Richard P. Hallion, John M. Logsdon.

How Big and Still Beautiful? Macroengineering Revisited (4 Jan., 9:00 a.m., 3:00 p.m., SH): Appropriate scale, large-scale technology, costs, human values, evaluation, rural technology, islands, rigid airship, hypersonics.

Frank P. Davidson, John E. Fobes, Cynthia Harris, William J. Jones, Ramon Barquin, George Kozmetsky, Hans Huessy, Robert Salkeld, James McHale, John T. Craven, Francis Morse, J. Peter Vajk, C. Lawrence Meador, John A. Seeger.

Industrial Maturation and the Shifting Spectrum of Scientific Innovation (5 Jan., 9:00 a.m., SH): Views on the future, chemical industry, automotive industry, pharmaceutical research, common carriers.

Thomas Baron, James Gumnick, Norman Hackerman, Paul Howell, J. O. Milligan, Robert A. Charpie, Paul F. Chenea, William N. Hubbard, Jr., John R. Pierce.

The Frontiers of the Social Sciences (5 Jan., 3:00 p.m., SH): Anthropology, biological psychology, sociology.

Meredith P. Crawford, Priscilla Reining, Richard N. Adams, Sandra W. Scarr, Nathan Keyfitz.

Frontiers of the Natural Sciences (6 Jan., 9:00 a.m., 3:00 p.m., SH): Ant communication, mathematics, physics, chemistry, geology, cosmology.

Rolf M. Sinclair, Norman Hackerman, Bertold Holldobler, Joseph B. Keller, William M. Fairbank, George C. Pimentel, David W. Scholl, James E. Gunn.

Science in Society: Are There Limits to Usable Knowledge? (7 Jan., 9:00 a.m., 3:00 p.m., SH): Scientific productivity, fundamental limits, human intelligence, artificial intelligence, public education, cultural limits, directed research, our knowledge.

Gregg Edwards, William A. Gale, Norman Hackerman, Gunther Stent, Joseph Weizenbaum, J. E. Pournelle, I. I. Rabi, Raymond Cattell, Richard Cyert.

2. Mathematical and Physical Science

Mathematics Today (3 Jan., 3:00 p.m., SH): Four color, differential geometry, minimum network, computation.

Felix E. Browder, Wolfgang Haken, Roger Penrose, Ronald Graham, Martin Davis.

Observing Opportunities for Orbiting Astronomers—Spacelab and Beyond (3 Jan., 3:00 p.m., HM): UV, optical, solar, infrared, and space astronomy.

Karl G. Henize, Adrienne F. Timothy, George H. Rieke, Harlan J. Smith.

Science for the Naked Eye, Or the Physics of Everyday Experience, VI (4 Jan., 9:00 a.m., 3:00 p.m., SH): View from planets, gems or gyps, partly random music, sports, simulation of literature, gothic cathedrals.

Rolf M. Sinclair, Harold Masursky, George R. Rossman, Joseph B. Keller, Richard F. Voss, William R. Bennett, Jr., Robert Mark.

Frontiers of Industrial Physics (5 Jan., 9:00 a.m., SH): Surface electron energies, catalysis, crystal architecture.

D. Allan Bromley, Dean Eastman, John H. Sinfelt, Arthur C. Gossard.

Future Developments in Electrochemistry and Related Fields (5 Jan., 3:00 p.m., SH): Raman spectroscopy, photoelectrochemistry, semiconductor-liquid junctions, electrode kinetics, future developments.

Rudolph A. Marcus, Norman Hackerman, Richard P. Van Duyne, Allen J. Bard, Barry Miller, Fred C. Anson, V. G. Levich.

Chemistry in Space (6 Jan., 9:00 a.m., 3:00 p.m., SH): Interstellar molecules and dust grains, interplanetary grains, meteorites, comets.

Paul W. Hodge, William D. Watson, Patrick Thaddeus, William Klemperer, Edward M. Purcell, Donald E. Brownlee, Lawrence Grossman, Armand H. Delsemme.

Satellite Oceanography: The SEASAT-I Mission (7 Jan., 9:00 a.m., HM): Radar experiment, orbit determination, scatterometer, microwave radiometer, data systems.

George H. Born, Byron D. Tapley, Raynor L. Duncombe, S. Walter McCandless, W. E. Giberson, Paul Teleki, John W. Sherman, W. Linwood Jones, Duncan Ross, James A. Dunne.

Climatic Changes as a Potential Hazard Revealed by Geologic and Contemporary Records (7 Jan., 3:00 p.m., HM): Volcanic activity, oxygen isotope data, deep-sea cores, west Antarctic ice sheet and sea ice, water supply, implications.

Robert F. Black, Reid A. Bryson, Claes G. H. Rooth, Terrence J. Hughes, George H. Denton, James D. Hays, Charles W. Stockton, Stephen H. Schneider.



The fifth annual *SCIENCE INTERNATIONAL* exposition of scientific instruments and publications will be held in conjunction with the forthcoming AAAS Annual Meeting in Houston, in the Hall of Exhibits of the Shamrock Hilton hotel, Thursday, 4 January, through Sunday, 7 January. If your company or organization wishes to participate in *SCIENCE INTERNATIONAL*, please contact: Edward B. Ruffing, *SCHERAGO ASSOCIATES*, 1515 Broadway, New York, N.Y. 10036; (212) 730-1050.

Weather, Climate, and Public Policy (8 Jan., 9:00 a.m., SH): Weather resources, atmospheric carbon dioxide, impacts on society, international cooperation.

Roger Revelle, David M. Burns, Harlan Cleveland, Frederick E. Smith, Thomas F. Malone.

3. Biological Science

Ligand Assays. The State of the Art (3 Jan., 3:00 p.m., HM): Radioimmunoassay, prostaglandins and thromboxanes, parathyroid hormone, estrogen receptor.

Barry G. England, Daisy S. McCann, Robert J. Ryan, Frank A. Fitzpatrick, Gino V. Segre, James H. Clark.

Various Approaches to the Study of Biologically Active Compounds (4 Jan., 9:00 a.m., HM): Molybdenum complexes, metalloporphyrins, quantum chemical calculations, nitrosamines.

Toby F. Block, John H. Enemark, Eugene C. Johnson, David H. Dolphin, Joyce J. Kaufman, William Ljinsky.

Nature and Functional Role of Cytochrome P-450 Mediated Systems (4 Jan., 3:00 p.m., HM): Cellular and tissue distribution, biological and ecological significance.

Sami Ahmad, Ronald W. Estabrook, Ernest Hodgson, James R. Gillette, Lena B. Brattsten.

Effects of Prenatal Exposure to Alcohol: Human and Animal Studies (5 Jan., 9:00 a.m., HM): Maternal alcoholism, animal models, effects of CNS depressants, social drinking, fetal alcohol syndrome.

Sharon Landesman-Dwyer, Ann Pytkowicz Streissguth, G. F. Chernoff, Joan C. Martin, Ernest P. Noble.

Animal Models for the Study of Breast Cancer (5 Jan., 3:00 p.m., HM): Radiation-estrogen carcinogenesis, chemical carcinogen, experimental model, mammary neoplasia.

Seymour Holtzman, Albert Segaloff, Dilip K. Sinha, Clifford W. Welsh, Claire J. Shellabarger.

Hemoglobin—A Model Protein (6 Jan., 9:00 a.m., HM): Structure-function relationships, molecular adaptations, evolution in higher organisms, structural variants.

Hiroshi Mizukami, Andreas Rosenberg, Austen F. Riggs, Morris Goodman, Donald L. Rucknagel.

Interactions Between Water and Cytoplasmic Structures (6 Jan., 3:00 p.m., HM): Living cells and model systems, water-soluble spin labels, extended protein chains, diffusional processes.

Carlton F. Hazlewood, Keith R. Porter, Paula T. Beall, Andrea M. Mastro, Gilbert N. Ling, Alec D. Keith.

Handicapped Scientists: Some of Their Current Contributions to Biological and Medical Research (7 Jan., 9:00 a.m., SH): Blood pressure control, ionizing radiations, carcinogenicity, allergic disease, gonorrhea.

Nansie S. Sharpless, Myron H. Weinberger, C. E. Grim, F. C. Luft, S. Phyllis Stearner, Anne B. Swanson, John J. Gavin, Robert P. Williams, Sheldon M. Steiner, Edward R. Gubish, Jr.

Clinical and Biochemical Aspects of Trace Metal Metabolism in Man (7 Jan., 3:00 p.m., HM): Zinc metabolism, genetic information transfer, copper complexes, chromium.

Roland F. Bonewitz, Jr., R. Rodney Howell, Rubye P. Torrey, Robert J. Cousins, Gunther L. Eichhorn, John R. J. Sorenson, K. Michael Hambidge.

4. Medical Science

Internal Environment and the Immunologic State (3 Jan., 3:00 p.m., HM): Genetic considerations, nutrition, pharmacology, perinatal disease.

Barnet M. Levy, Tommy C. Douglas, Samuel Dreizen, Richard A. Orteiz, Bruce F. Mackler.

Genetics in Epidemiology (4 Jan., 9:00 a.m., 3:00 p.m., HM): Disease susceptibility, gene loci, mutations, chromosome disorders, environmental effects, public policy, familial aggregation, smoking-discordant twins, schizophrenia.

Bernice H. Cohen, Gordon Allen, Arno G. Motulsky, N. E. Morton, Ernest B. Hook, Gilbert S. Omenn, Abraham M. Lilienfeld,

Edmond A. Murphy, Rune Cederlöf, Barbara S. Dohrenwend, Leon Gordis.

Radiochemistry, Radiopharmaceuticals, Tomography, and New Aspects of Measuring Metabolism in Humans (5 Jan., 3:00 p.m., HM): Positron emission, organic and inorganic compounds labeled, neurological research.

Alfred P. Wolf, Michel M. Ter-Pogossian, Michael J. Welch, Martin Reivich.

Epidemiology Studies of Low-Level Radiation Exposure (6 Jan., 9:00 a.m., HM): Scientific criteria, standards, risk estimates, strategies.

Rosemary A. Chalk, Robert Alvarez, Alice Stewart, Eleanor MacDonald, Jacob I. Fabrikant, Charles Land, James L. Liverman, Clark W. Heath, Jr., William A. Mills, Morris L. Shore.

Biofeedback: Current Perspectives (6 Jan., 3:00 p.m., HM): Information for the therapist and patient, desensitization, relaxation techniques, research.

Theodore Weiss, Thomas G. Pickering, Ian E. Wickramasekera, Richard S. Surwit, Gary E. Schwartz.

The Role of Genetics and Human Semen Cryobanking in Family Planning (6 Jan., 3:00 p.m., SH): Standards, genetic counseling, genetic diseases, the Brave New World.

Mark S. Frankel, Mary S. Harris, Armand M. Karow, Jr., J. K. Sherman, James E. Bowman, James W. Couch, George P. Smith, II.

Neuroscience and Disease: A Role for Serendipity (7 Jan., 9:00 a.m., HM): Brain self-repair, myasthenia gravis, mental retardation, endorphins.

Michael V. L. Bennett, David A. Robinson, Douglas M. Fambrough, Dominick P. Purpura, Floyd E. Bloom.

The Cancer Problem (8 Jan., 9:00 a.m., SH): Hormone receptors, human lymphocytes, radiation and virus, minorities and women.

Louise T. Miller, Yolanda S. George, Judith Rae Lumb, G. Shyamala, Lawrence J. Alfred, Miriam P. Finkel, Barbara Bynum, Jewel Plummer Cobb.

5. Health Care

Technology and Health Care: Prospects and Pitfalls (3 Jan., 3:00 p.m., HM): Medical technology, prevention of illness, fragmentation of care, effectiveness, medical practice.

Stanley Joel Reiser, David E. Rogers, Lester Breslow, Rosemary A. Stevens, Frederick C. Robbins.

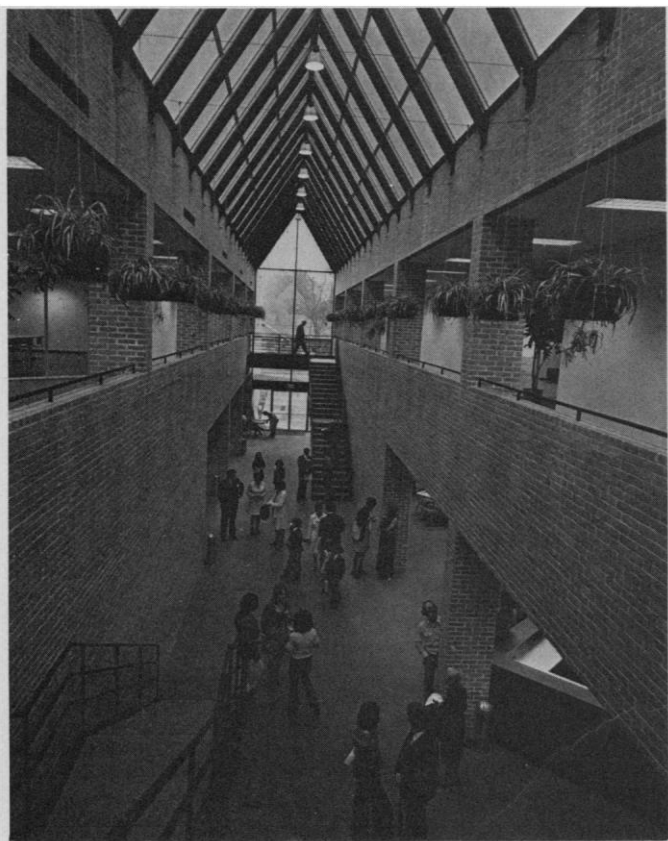
Health Enhancement: Prevention and Promotion (4 Jan., 9:00 a.m., HM): Health and well-being, behavioral medicine, fasting, health maintenance organization, health insurance, prevention.

Ronald W. Manderscheid, Lorenz K. Y. Ng, Richard I. Evans, Joseph B. Tamney, Frank Newman, Mathew Greenwald, John H. Proctor.

Health Care Systems: Insights Through Large-Scale Simulation Modeling (4 Jan., 3:00 p.m., HM): State of art, hypertension screening, national health insurance, medical technology, policy formulation.

Kenan E. Sahin, William Stason, William Hsiao, Harvey Fineberg, Howard Frazier.

Health and the Environment: The Need for Greater Concern (5 Jan., 9:00 a.m., 3:00 p.m., HM): National Institute for Environmental Health Sciences, Environmental Protection Agency, cancer, public's viewpoint, Food and Drug Administration, National Institute for Occupational Safety and Health,



Crooker Center, University of St. Thomas University Center. [Frank Grizzaffi, Houston]



University of Houston Central Campus. [Houston University]

Occupational Safety and Health Administration, Consumer Product Safety Commission.

Samuel Elkin, David P. Rall, Stephen J. Gage, Marvin A. Schneiderman, Barry Commoner, Marion J. Finkel, Edward J. Baier, R. Hays Bell, Michael A. Brown.

Politics, Science, and Cancer: The Laetrile Phenomenon (6 Jan., 9:00 a.m., HM): Sloan-Kettering case study, historical perspective, political implications, legal perspective, social context.

Gerald E. Markle, James C. Petersen, Richard D. Smith, James Harvey Young, Robert F. Rich, Grace Powers Monaco, Peter de la Cruz, Dorothy Nelkin, Allan Mazur.

Medical Innovation and Public Policy: The Case of DES (6 Jan., 3:00 p.m., HM): Reproductive tract anomalies, Food and Drug Administration, consumer protection, occupational health, legal responsibility, drug manufacturers.

Diana B. Dutton, John P. Bunker, Halsted Holman, Kenneth L. Noller, Marion J. Finkel, Robert Eckhardt, Anthony Mazocchi, Fay A. Saber, Raymond E. Rauch, Fran Fishbane, Jonathan King, Betsy Carleton.

Hypnosis in the Control of Pain (7 Jan., 9:00 a.m., HM): Surgery, symptom alteration, placebo hypnosis, pain reduction, hypnoanalgesia.

Marion Kenn, Paul Sacerdote, Harold B. Crasilneck, Luis Bravo, Frederick J. Evans, Ernest R. Hilgard, André M. Weitzenhoffer.

Psychosocial Aspects of Drug Treatment for Hyperactivity (7 Jan., 3:00 p.m., HM): Ritalin, 10-year follow-up, predictors of symptoms, drug therapy, illicit drug use.

Kenneth D. Gadow, Robert L. Sprague, Lily Hechtman, Jan Loney, Barbara Henker.

Self-Control Factors in the Use of Addictive Substances (8 Jan., 9:00 a.m., HM): Self-management, sociocultural factors, individual differences, excessive use, habitual behavior.

Peter K. Levison, Thomas C. Schelling, Judith Rodin, Gerald E. McClearn, John L. Falk, Peter Dews.

6. Agriculture and Nutrition

Research to Enhance Agricultural Productivity (3 Jan., 3:00 p.m., HM): Photosynthesis, molecular biology, saline environments, mycorrhizal symbionts, tissue culture.

Peter R. Day, R. Harold Brown, Timothy C. Hall, Frederick A. Bliss, Emanuel Epstein, John L. Ruehle, Donald H. Marx, Philip Gordon.

Animals, Feed, Food, and People (4 Jan., 9:00 a.m., 3:00 p.m., HM): Food animal production, international trade, forage, waste and by-product conversion, resource allocation, developing countries, nutritionist's view.

R. L. Baldwin, A. C. Bywater, Larry J. Martin, Karl D. Meilke, N. E. Smith, Henry S. Bayley, R. F. Brokken, Ludwig M. Eisgruber, J. K. Whittaker, Robert E. McDowell, Vernon R. Young.

Patterns and Effects of Diet and Disease Today (5 Jan., 9:00 a.m., 3:00 p.m., HM): Intake patterns, child development, lactation, bone maturation, dental caries, nutrition in later life, cancer, sugar and carbohydrate, protein-calcium, fiber, fats and lipids, vitamins, minerals, and elements.

John J. Hefferren, Mary L. Moller, Gilbert A. Leveille, Remba M. Hill, Buford Nichols, Dominic P. Depaola, George K. Stookey, Margaret Albrink, Seymour L. Romney, Ira L. Shannon, Helen M. Linkswiler, Jon A. Story, William Insull, Martin E. J. Curzon.

National Food Policy—Progress and Prospects (6 Jan., 9:00 a.m., HM): Nutrition research, dietary goals, the consumer, national food policy.

Alex Hershaft, Mark Hegsted, Nick Mottern, Joan D. Gussow, Rod Leonard, Joseph Crapa.

Agricultural Systems for Space Habitats (6 Jan., 3:00 p.m., HM): Closed food chain, controlled environment, phytotrons, food technology.

Jack M. Spurlock, Michael Modell, John M. Phillips, Carl N. Hodges, Annita Harlan, C. David Raper, Jr., Judith F. Thomas, Marcus Karel.

Environmental, Socioeconomic, and Political Aspects of Pest Management (7 Jan., 9:00 a.m., 3:00 p.m., HM): Public policy, economic milieu, environmental and social costs, benefits versus costs, technological change, legal controls.

David Pimentel, John H. Perkins, Joseph C. Headley, John Krummel, Jerry D. Stockdale, A. Dan Tarlock.

Plant Growth Regulators: Potential for Increasing Agricultural Productivity (8 Jan., 9:00 a.m., HM): Internal control points, synthetic regulators, assimilates in plants, problems in clearance.

Larry D. Noodén, A. Carl Leopold, Lawrence Rappaport, Page Morgan, Donald R. Geiger, Douglas Campt.

7. Ecology and Environment

Technical and Environmental Implications in the Development of Marine Transportation Systems in the Arctic (3 Jan., 3:00 p.m., SH): Nuclear icebreaker, Arctic LNG, ice forecasts, innovative systems, offshore drilling.

John E. Sater, Derek E. Evans, William H. German, Russell B. Thornburg, Murray Todd.

Deep-Sea Ecology (4 Jan., 9:00 a.m., 3:00 p.m., SH): Bathyal region, megabenthic fauna, depth zonation patterns, harpacticoid copepods, deep-sea amphipods, Norfolk Canyon, bathypelagic animals, deep benthic fish, deep-sea holothuroids, demersal deep-sea fishes.

Paul A. Haefner, Jr., Edward B. Cutler, Richard L. Haedrich, Joseph F. Siebenaller, David Thistle, A. Aristides Yayanos, Charles A. Wenner, James J. Childress, Kenneth J. Sulak, Robert S. Carney, John A. Musick.

The Amoco Cadiz Oil Spill (5 Jan., 9:00 a.m., SH): U.S. studies, oil sediment interactions, weathering effects, biological effects, cleanup processes.

Wilmot N. Hess, Miles O. Hayes, Erich R. Grundlach, John A. Calder, Ford A. Cross, Roy W. Hann.

Air-Sea Interaction in the Gulf of Mexico (5 Jan., 3:00 p.m., SH): Sea, lake, and overland surges, ocean wave climate, hindcasting hurricane waves, sediment dynamics.

Robert O. Reid, Guy A. Franceschini, Chester P. Jelesnianski, Donald T. Resio, George Z. Forristall, David W. McGrail.

Gulf Coast Industry and Wildlife Management (6 Jan., 9:00 a.m., SH): Environmental benefits, fin and shell fisheries, land development, environmental quality, fish and wildlife resources.

Donald J. Zinn, Keith G. Hay, Robert Mauermann, James C. Stribling, Bob Eckhardt, Ted L. Clark, Bob Kemp.

Mitigating Developmental Impacts on Fish and Wildlife (6 Jan., 3:00 p.m., SH): Status, legal problems, preventing losses, evaluation of planning, law and policy.

Gerald C. Horak, Martin H. Lewis, Ann G. Rappoport, Norville S. Prosser, Robert G. Martin, Patrick A. Parenteau.

Effects of Desertification on Soil Chemical, Physical, and Biological Properties (7 Jan., 9:00 a.m., SH): Soils, salts, sedimentation and erosion.

H. E. Dregne, B. L. Allen, Gerald W. Olson, Burns R. Sabey, Lynn D. Whittig, Peter J. Wierenga.

The National Forest Management Act Two Years Later: Scientific Issues Involved in Implementing NFMA (7 Jan., 3:00 p.m., SH): Resource planning, land and resource management, scientific issues.

Arthur W. Cooper, Thomas C. Nelson, Charles R. Hartgraves,

Stephen H. Spurr, Thaddeus Box, R. Rodney Foil, Ronald Stark, Earl L. Stone, Dennis E. Teeguarden, William L. Webb.

Public Lands Belong to All the People (8 Jan., 9:00 a.m., SH):

Priority needs, food production, multiple use, grazing fees.

Clair E. Terrill, Richard O. Wheeler, Evert K. Byington, H. A. Henderson, Billy F. Headden, Gerald W. Thomas, Darwin B. Nielsen, Robert S. Rummell.

8. Mathematics in Biological and Social Sciences

The Uses and Misuses of Survey Data (3 Jan., 3:00 p.m., HM):

Public policy decisions, marketing decisions, public opinion polls, social science research, evaluation of survey data.

Barbara A. Bailer, Samuel W. Greenhouse, Robert F. Boruch, Ingrid C. Kildegaard, Philip E. Meyer, Duane F. Alwin, Daniel Melnick, William H. Williams.

Some Mathematical Questions in Biology (4 Jan., 9:00 a.m., 3:00 p.m., HM): Infectious diseases, malaria, allergic reactions, control mechanisms, optimal harvesting, cell biology.

Simon A. Levin, Robert M. May, Roy Anderson, Joel E. Cohen, Carla Wofsy, Sol I. Rubinow, F. C. Hoppensteadt, Donald Ludwig, Harvey P. Greenspan.

Artificial Intelligence in Medicine (5 Jan., 9:00 a.m., HM): Clinical expertise, ill-structured problems, medical decision-making.

Peter Szolovits, Harry E. Pople, Randall Davis, Casimir A. Kulikowski.

Application of Statistics to Problems of Air Pollution, Including Effects on Health (5 Jan., 9:00 a.m., HM): Ambient air pollutants, local variation, acute health effects.

Paul Switzer, Donald L. Thomsen, Jr., George C. Tiao, Ray E. Faith, Edward L. Korn, Yvonne M. Bishop.

Pattern Recognition: Introduction, Theory, and Application (5 Jan., 3:00 p.m., HM): Human face profiles, radiography, texture analysis, pattern discrimination, polynomial functions.

Robert S. Ledley, Louis S. Rotolo, Leon D. Harmon, Jack Sklansky, Chan M. Park, Robert M. Haralick, William A. Porter.

Autopoiesis, Dissipative Structures, and Spontaneous Social Orders (6 Jan., 9:00 a.m., 3:00 p.m., HM): Order by fluctuation, evolution, socioeconomic inequalities, dissipative structures, hypercycles and ultracycles, disturbed cell renewal systems, automata simulations.

Milan Zeleny, Peter M. Allen, Humberto R. Maturana, Alfred Gierer, Erich Jantsch, Werner Düchting, Leslie Lasker, Max Dresden.

Frontiers of Behavioral Mathematics (7 Jan., 9:00 a.m., HM): Differential topology, decision analysis, cognitive psychology, stochastic calculus.

Loren Cobb, David Berlinski, Robert M. Thrall, David E. Kieras.

Hard and Soft Data in Multicriterion Benefit-Cost Modeling (7 Jan., 3:00 p.m., HM): Fuzzy sets, soft data, multi-attribute utility measurement, non-monetary factors.

Robert M. Thrall, Lofti Zadeh, Ward Edwards, C. William Devaney, Gerald D. Rosenthal, Rodney Pelton.

Advances in Distributed Processing: Implications for Neuroscience Paradigms (8 Jan., 9:00 a.m., HM): Cerebellum, distributed problem-solving, information processing and retrieval, message routing, associative memory and integration, neural function and organization.

Kenan E. Sahin, Andras Pellionisz, Rodolfo Llinas, Victor R. Lesser, W. Ross Adey, Parvati Dev.



Annual Meeting Houston 3-8 January 1979

EASTERN and CONTINENTAL Airlines are making it easier than ever for you to attend our Annual Meeting.

Their CONVENTION CENTRAL TRAVEL COORDINATORS are briefed on all details of the meeting and are especially trained to assist you in booking your air accommodations to Houston. But that's not all!!! They can also plan pre or post convention vacations to a variety of exciting places.

If you want to bask in the sun you may choose one or several of the tropical paradises that EASTERN has to offer in Florida, Mexico or the Caribbean. Or maybe you would prefer a skiing vacation in the Rockies or the dry, sunny air of the Southwest...CONTINENTAL will help you get there.

ACT NOW!!!...the sooner the better...early January is a busy time for travelling...plus, if you make your reservations early you may be eligible for some discounted fares, including the new Super Savers!!!...inquire about EASTERN's Unique Unlimited Mileage Fare, you'll be surprised how far your travel dollars can go!!!

Unlisted toll-free numbers to their Convention Desks are being provided by EASTERN and CONTINENTAL according to geographical location as shown on the map above.

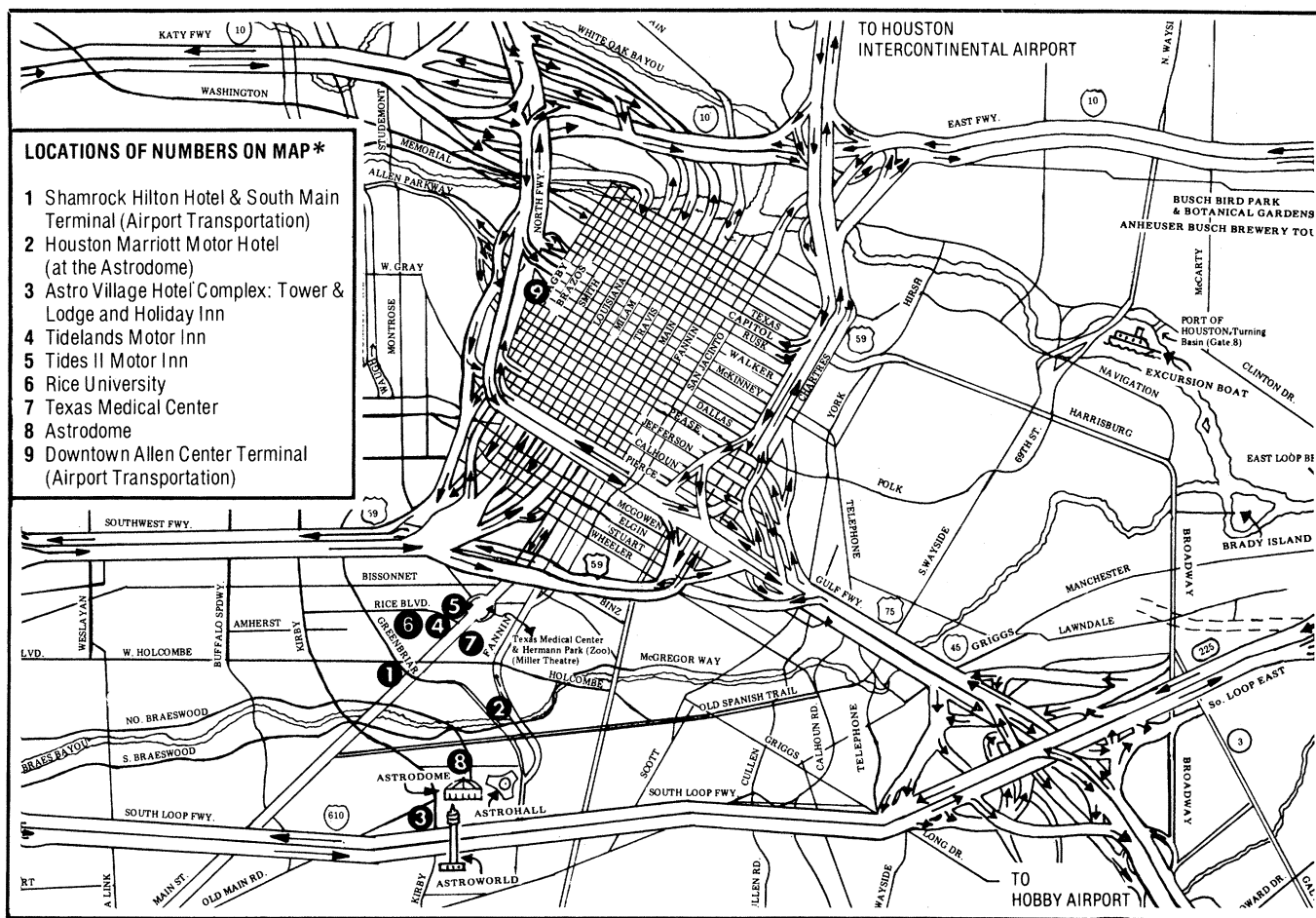
Remember These Numbers...

West of the Mississippi, call **800-525-1130**

East of the Mississippi, call **800-327-1295**

CONTINENTAL AIRLINES 

 **EASTERN**



*Map is not to scale. Approximate distance from Shamrock Hilton (1) to Houston Marriott (2) is 1/2 mi.; to Astro Village (3), 2 mi.; to Tideland (4) and Tides II (5), 1/4 mi.; to downtown Houston (9), 4 mi.



Annual Meeting
Houston
3-8 January 1979

MAIL TO:
AAAS—DEPT. R
1515 Massachusetts Ave., NW
Washington, D.C. 20005

ADVANCE REGISTRATION FORM

(C)

• PLEASE READ CAREFULLY •

- Preconvention Program, badge, and voucher for full Program and Abstracts will be mailed to registrants in early December.
- Full Program and Abstract Volume will be held at *Advance Registrants' Desks* (Shamrock Hilton and Marriott hotels).
- Registrations received after 15 December will be held at the AAAS Information Booth.

PART I: Registrant's name and mailing address for receipt of badge(s), preconvention program(s), and *Science* (for new applicants)

(FIRST NAME)															(LAST)														
(STREET ADDRESS OR P.O. BOX NUMBER)																													
(CITY)															(STATE)					(ZIP—U.S.A.)									
(COUNTRY)															(AREA CODE)					(PHONE NUMBER)									
(NAME OF INSTITUTION OR COMPANY)																													

PART III: Additional registrant(s) with same mailing address (use separate form if address differs)

(FIRST NAME)															(LAST)														
(FIRST NAME)															(LAST)														

PART II: Check ☒ categories of registration and enclose amount(s) indicated

Meeting Registration Categories	Single	Double (incl. Spouse)
AAAS Member	<input type="checkbox"/> \$25	<input type="checkbox"/> \$38
<input type="checkbox"/> Student or <input type="checkbox"/> Retired Member (Check one)	<input type="checkbox"/> \$13	<input type="checkbox"/> \$20
Non-Member	<input type="checkbox"/> \$31	<input type="checkbox"/> \$44

Non-Members applying for membership with registration (check below): Dues of \$31 (single) and \$43 (double) includes one subscription to *Science* (52 issues per year). Rates are domestic-regular membership. Inquire for Canadian, other foreign, student, and retired persons.

- ☐ \$56 Meeting registr. and single membership
☐ \$69 Double registr. and single membership

Name of Member: _____

- ☐ \$81 Double registr. and double membership

NOTE: Special one-day attendance registration will be available at Registration Desks.

CONVENTION ADDRESS: _____
(Where you can be reached) (Hotel, Street Address, and/or Phone No.)

Check days attending: Wed ☐ Thu ☐ Fri ☐ Sat ☐ Sun ☐ Mon ☐

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

SURVEY OF ATTENDANTS
Annual Meeting, Houston, 3-8 January 1979

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	Number of Past AAAS Meetings Attended
41 <input type="checkbox"/> Doctoral Degree	51 <input type="checkbox"/> Under 26 years	61 <input type="checkbox"/> None
42 <input type="checkbox"/> Master's Degree	52 <input type="checkbox"/> 26 to 35 years	62 <input type="checkbox"/> One
43 <input type="checkbox"/> Other professional	53 <input type="checkbox"/> 36 to 45 years	63 <input type="checkbox"/> Two
44 <input type="checkbox"/> Bachelor's Degree	54 <input type="checkbox"/> 46 to 55 years	64 <input type="checkbox"/> Three
45 <input type="checkbox"/> (other)	55 <input type="checkbox"/> 56 to 65 years	65 <input type="checkbox"/> Four
	56 <input type="checkbox"/> Over 65 years	66 <input type="checkbox"/> Five or more
		Distance Traveled to Meeting
		71 <input type="checkbox"/> Under 51 miles
		72 <input type="checkbox"/> 52 to 150 miles
		73 <input type="checkbox"/> 151 to 400 miles
		74 <input type="checkbox"/> 401 to 1000 miles
		75 <input type="checkbox"/> 1001 to 3000 miles
		76 <input type="checkbox"/> Over 3000 miles

Annual Meeting
Houston
3-8 January 1979



(Reservations received after 13 December cannot be guaranteed)

● PLEASE READ CAREFULLY ●

- Please *PRINT* or *TYPE* all items to assure accuracy.
- Complete each part below in detail for correct and rapid computer processing.
- Should more than *ONE (1) room* be needed, supplemental room list *MUST* be attached using same format as in Part III.
- *ALL* confirmations will be sent to individual indicated in Part I.

PART II: Select *THREE* hotels or motels of your choice, using *HOTEL CODES* listed below. No request will be processed without *THREE* choices.

NAME OF PERSON REQUESTING ROOMS:

[illegible]

(NAME OF COMPANY OR INSTITUTION)

[illegible][illegible][illegible]

(CITY)

(STATE)

(ZIP - U.S.A.)

[illegible]

(COUNTRY)

(AREA CODE)

(PHONE NUMBER)

First Choice ☐ ☐ ☐ ☐
(HOTEL CODE)

Second Choice ☐ ☐ ☐ ☐
(HOTEL CODE)

Third Choice ☐ ☐ ☐ ☐
(HOTEL CODE)

Check one: **ROOM:** ☐ Single ☐ Double ☐ Twin **SUITE:** ☐ Parlor + 1 Bedroom ☐ Parlor + 2 Bedrooms

Please indicate any special housing needs due to a handicap: _____

1. _____

2. _____

3. _____

4. _____

DEPARTURE DATE: _____ TIME: _____ ☐ a.m. ☐ p.m.

Note: Be sure to list definite arrival and departure date and time. Reservations will be held only until 6 p.m. unless special arrangements are made with hotel. The hotel may request a deposit.

Hotel	Hotel Code	Single	Double & Twin	Parlor + 1 Bedrm.	Parlor + 2 Bedrms.
Shamrock Hilton (<i>Headquarters</i>) [circle preferred rate]	SH	\$32, \$36, \$40	\$44, \$48, \$52	\$80	\$120
Houston Marriott	MMH	\$30	\$38	\$100	\$135
Astro Village Tower & Lodge	ASVI	\$30	\$36	\$100	\$135
Holiday Inn—Astro Village	HIAV	\$28	\$34	\$75	\$100
Tidelands Motor Inn	TLM	\$26	\$33	—	—
Tides II Motor Inn	TLII	\$28	\$35	\$60	\$100

IMPORTANT: No phone orders will be accepted. Hotel locations are shown on map. Housing Bureau processes reservations in order of date received. Confirmations will come direct from your hotel. **DO NOT SEND DEPOSITS WITH RESERVATIONS.** If rooms are not available at hotels of your choice, comparable reservations will be made at another cooperating hotel. If rate requested is not available, next available rate will be assigned. Cancellations must be made through the Housing Bureau only; other changes should be made directly with hotel.

For map of Houston, see page 421 in this issue.