## APPENDIX G

National Science Foundation-Sponsored Scientific Conferences, Symposia, and Advanced Science Seminars Held During Fiscal Year 1963

## SCIENTIFIC CONFERENCES AND SYMPOSIA IN THE BIOLOGICAL AND MEDICAL SCIENCES

SYMPOSIUM ON HETEROSYNTHETIC AND AUTOSYNTHETIC MOLECULES IN DEVELOP-MENTAL PROCESSES—Philadelphia, Pa.; Dec. 26-30, 1962; Chairman: Edgar Zwilling, Biology Department, Brandeis University; Cosponsors: American Society of Zoologists, American Association for the Advancement of Science.

CONFERENCE ON COMPARATIVE DEVELOPMENTAL BEHAVIOR—New York, N.Y.; Jan.-June, 1963 (Biweekly); Chairman: Frances H. Palmer, Social Science Research Council; Cosponsor: Social Science Research Council.

CONFERENCE ON BODY COMPOSITION—New York, N.Y.; Jan. 28—Feb. 2, 1963; Chairman: Joseph Brozek, Lehigh University; Cosponsors: New York Academy of Sciences and National Institutes of Health.

SYMPOSIUM ON PROSPECT FOR EXPERIMENTAL CONTROL OF HUMAN BEHAVIOR—Delaware, Ohio; April 6, 1963; Chairman: Elwood B. Shirling, Department of Botany and Bacteriology, Ohio Wesleyan University.

MICROCIRCULATORY CONFERENCE—Bethesda, Md.; April 7-9, 1963; Chairman: Herbert J. Berman, Department of Biology, Boston University; Cosponsors: National Institutes of Health, Royal Microscopic Society.

International Conference on Some Biochemical and Immunological Aspects of Host-Parasite Relationships—New York, N.Y.; April 23-25; 1963; Chairman: Thomas G. Cheng, Department of Biology, Lafayette College; Cosponsor: New York Academy of Sciences.

Conference on Biological Coding by Macromolecules—Montreal, Canada; April 30-May 2, 1963; Chairman: Martyn Ycas, Department of Microbiology, State University of New York; Cosponsor: State University of New York.

International Conference on Histone Biology and Chemistry—San Diego, Calif.; April 29-May 2, 1963; Chairmen: James Bonner, California Institute of Technology and Paul O. P. Ts'o, Johns Hopkins University; Cosponsors: Office of Naval Research, California Institute of Technology, and H. Kirke Macomber.

SYMPOSIUM ON GROWTH—Cleveland, Ohio; May 5-9, 1963; Chairman: J. L. Stokes, American Society of Microbiology; Cosponsor: American Society of Microbiology.

CONFERENCE ON THE BASIC MECHANISMS IN THE RADIATION CHEMISTRY OF AQUE-OUS MEDIA—Gatlinburg, Tenn.; May 8-10, 1963; Chairmen: Edwin J. Hart, Argonne National Laboratory and Ernest Pollard, Pennsylvania State University; Cosponsors: Atomic Energy Commission, National Academy of Sciences—National Research Council.

Conference on Cellular Control of DNA Biosynthesis—Aspen, Colo.; May 30-June 1, 1963; Chairman: Rollin Hotchkiss, Rockefeller Institute; Cosponsor: St. Louis University.

Conference on Synthesis and Structure of Macromolecules and First Meeting of the Commission on Molecular Biophysics of the International Organization for Pure and Applied Biophysics—Côld Spring Harbor, N.Y.; June 7–13, 1963; Chairman: H. Edwin Umbatger, Director, Cold Spring Harbor Laboratory; Cosponsors: National Institutes of Health, National Aeronautics and

Space Administration, Office of Naval Research, Atomic Energy Commission, Air Force Office of Scientific Research, Long Island Biological Association.

CONFERENCE ON LEARNED AND NONLEARNED BEHAVIOR IN IMMATURE ORGANISMS—Madison, Wis.; June 9-14, 1963; Chairman: Harold W. Stevenson, Institute of Child Development, University of Minnesota; Cosponsor: Social Science Research Council.

SEMICENTENNIAL MEETING OF THE AMERICAN SOCIETY OF OCHTHYOLOGISTS AND HERPETOLOGISTS—Vancouver, B.C.; June 17-22; Chairman: Carl L. Hubbs, Scripps Institution of Oceanography, University of California, La Jolla; Cosponsor: University of British Columbia.

GORDON RESEARCH CONFERENCE ON NUCLEIC ACIDS—New Hampton, N.H.; June 17–21, 1963; Chairman: Heinz Frankel-Conrat, Virus Laboratory, University of California, Berkeley; Cosponsor: Gordon Research Conferences, Inc.

GORDON RESEARCH CONFERENCE ON CELL STRUCTURE AND METABOLISM—Meriden, N.H.; June 17-21, 1963; Chairman: Alexander Leaf, Harvard Medical School, Cambridge, Mass.; Cosponsor: Gordon Research Conferences, Inc.

GORDON RESEARCH CONFERENCE ON PROTEINS—New Hampton, N.H.; June 24–28, 1963; Chairman: Harold Scheraga, Department of Chemistry, Cornell University; Cosponsor: Gordon Research Conferences, Inc.

## SCIENTIFIC CONFERENCES AND SYMPOSIA IN THE MATHEMATICAL, PHYSICAL, AND ENGINEERING SCIENCES

International Congress on Glass—Washington, D.C.; July 8-14, 1962; Chairmen: C. H. Hahner, National Bureau of Standards and J. H. Koenig, School of Ceramics, Rutgers University; Cosponsors: The International Commission on Glass and the American Ceramic Society.

CONFERENCE ON DYNAMICAL SYSTEMS—Copenhagan, Denmark; July 15-August 19, 1962; Chairman: Shlomo Sternberg, Harvard University; Cosponsor: Research Institute for Advanced Studies.

THIRD INTERNATIONAL SYMPOSIUM ON X-RAY MICROANALYSIS—Stanford, Calif.; August 22–24, 1962; Chairman: Howard H. Pattee, W. W. Hansen Laboratories of Physics, Stanford University; Cosponsor: Stanford University.

Symposium on Astrometery—New Haven, Conn.; August 26–29, 1962; Chairman: Dirk Brouwer, Yale University Observatory; Cosponsor: American Astronomical Society.

NINTH INTERNATIONAL COMBUSTION SYMPOSIUM—Ithaca, N.Y.; August 27-September 1, 1962; Chairman: Bernard Lewis, President, The Combustion Institute, Pittsburgh, Pennsylvania; Cosponsors: U.S. Army Research Office, National Aeronautics and Space Administration, and The Combustion Institute.

CONFERENCE ON DUST EXPLOSIONS—University Park, Pa.; Sept. 4-5, 1962; Chairman: M. W. Thring, University of Sheffield, England; Cosponsor: Pennsylvania State University, College of Mineral Industries.

CONFERENCE ON FLUID DYNAMICS IN GEOPHYSICS—Boulder, Colo.; September 5-8, 1962; Chairman: Walter Orr Roberts, National Center for Atmospheric Research; Cosponsors: American Meteorological Society, American Physical Society, and the American Institute of Physics.

WORKING CONFERENCE IN PERU ON EQUATORIAL AERONOMY—Huaychulo, Peru; September 18-26, 1962; Chairman: Merle A. Tuve, Department of Terrestial Magnetism, Carnegie Institution of Washington; Cosponsors: Instituto Geofisico del Peru; Carnegie Institution of Washington; Peruvian Government, Central Radio Propogation Laboratories, and Air Force Cambridge Research Laboratories.

WORLD CONFERENCE ON SHELL STRUCTURES—San Francisco, Calif.; October 1-4, 1962; Chairman: Egor Popov, Department of Civil Engineering, University of Cali-

fornia, Berkeley; Cosponsors: National Academy of Science—National Research Council, International Association for Shell Structures, and the University of California.

EASTERN CONFERENCE ON THEORETICAL PHYSICS—Charlottesville, Va.; October 26–27, 1962; Chairman: Morris E. Rose, Department of Physics, University of Virginia; Cosponsor: University of Virginia.

INTERNATIONAL CONFERENCE ON SALINE DEPOSITS—Grand Junction, Colo. and Houston, Tex.; November 2–23, 1962; Chairman: Ralph E. Taylor, Humble Oil and Refining Company; Cosponsors: National Academy of Sciences—National Research Council, American Geological Institute, Atomic Energy Commission, and the Advanced Research Projects Agency.

CONFERENCE ON PHOTON INTERACTIONS IN THE BEV-ENERGY RANGE—Cambridge, Mass.; January 25-30, 1963; Chairman: Bernard T. Feld, Laboratory for Nuclear Science, Massachusetts Institute of Technology; Cosponsors: Massachusetts Institute of Technology, Atomic Energy Commission, and Office of Naval Research.

ENGINEERING FOR MAJOR SCIENTIFIC PROGRAMS—Atlanta, Ga.; February 5-6, 1963; Chairman: M. W. Long, Engineering Experiment Station, Georgia Institute of Technology; Cosponsor: Georgia Institute of Technology.

CONFERENCE ON BALANCED RESEARCH IN MINERAL DEPOSITS—Dallas, Tex.; February 23-28, 1963; Chairman: L. C. Graton, Professor Emeritus of Harvard; Cosponsor: Southern Methodist University.

INTERNATIONAL SYMPOSIUM ON UNIT PROCESSES IN HYDROMETALLURGY—Dallas, Tex.; February 24–28, 1963; Chairmen: Milton E. Wadsworth, University of Utah and Franklin T. Davis, Metallurgical Division, Colorado School of Mines; Cosponsor: Metallurgical Society of the American Institute of Mining, Metallurgical and Petroleum Engineers.

CONFERENCE ON COMPLEX MANIFOLDS AND SEVERAL COMPLEX VARIABLES.—Notre Dame, Ind.; March 2-10, 1963; Chairman: Wilhelm Stoll, Department of Mathematics, University of Notre Dame; Cosponsor: University of Notre Dame.

SECOND INTERNATIONAL CONGRESS ON METALLIC CORROSION—New York, N.Y.; March 11-15, 1963; Chairman: E. C. Greco, United Gas Corporation; Cosponsor: National Association of Corrosion Engineers.

CONFERENCE ON DEFORMATION TWINNING—Gainesville, Fla.; March 21–22, 1963; Chairman: Robert E. Reed-Hill, University of Florida; Cosponsors: University of Florida and The Metallurgical Society of the American Institute of Mining, Metallurgical and Petroleum Engineers.

SYMPOSIUM ON STRESS WAVES IN ANELASTIC SOLIDS—Providence, R.I.; April 3-5, 1963; Chairman: H. Kolsky, Division of Applied Mathematics, Brown University; Cosponsor: The International Union of Theoretical and Applied Mathematics.

OCEANIC BIOGEOCHEMISTRY SYMPOSIUM—Bedford Institute of Oceanography, Halifax, Nova Scotia; April 5-6, 1963; Chairman: Fritz Koczy, Institute of Marine Science, University of Miami; Cosponsors: Scientific Committee on Oceanographic Research of the International Council of Scientific Unions, Committee on Oceanography, National Academy of Sciences—National Research Council.

SYMPOSIUM ON ELECTROCHEMICAL EFFECTS ON THE MECHANICAL PROPERTIES OF METALS—Pittsburgh, Pa.; April 14–18, 1963; Chairman: Robert K. Shannon, The Electrochemical Society, Inc.; Cosponsor: The Electrochemical Society, Inc.

INTERNATIONAL CONFERENCE ON NONLINEAR MAGNETICS—Washington, D.C.; April 17-19, 1963; Chairman: J. J. Suozzi, Bell Telephone Laboratories; Cosponsors: Institute of Radio Engineers and the American Institute of Electrical Engineers.

SYMPOSIUM ON ASTRONOMICAL INSTRUMENTATION—Tucson, Ariz.; April 17–20, 1963; Chairman: A. B. Meinel, Department of Astronomy, University of Arizona.

Conference on Instrument Techniques in Nuclear Pulse Analysis—Monterey, Calif.; April 29—May 3, 1963; Chairman: F. S. Goulding, Lawrence Radiation Laboratory; Cosponsors: National Academy of Sciences—National Research Council and Atomic Energy Commission.

CONFERENCE ON COMPUTER UTILIZATION IN GEOLOGY AND GEOGRAPHY—Washington, D.C., May 11, 1963; Chairmen: Edward B. Espenshade, Jr. and William T. Pecora; Cosponsors: Office of Naval Research; Division of Earth Sciences, National Academy of Sciences—National Research Council.

MIDWEST CONFERENCE ON THEORETICAL PHYSICS—Notre Dame, Ind.; May 31-June 1, 1963; Chairman: Charles J. Mullin, Department of Physics, University of Notre Dame; Cosponsor: University of Notre Dame.

THIRD CONFERENCE ON HURRICANES AND TROPICAL METEOROLOGY—Mexico City, Mexico; June 6-12, 1963; Chairman: M. A. Alaka; Cosponsors: The Mexican Geophysical Union, the American Geophysical Union, and the American Meteorological Society.

STATE OF STRESS IN THE EARTH'S CRUST—Santa Monica, Calif.; June 13–14, 1963; Chairman: W. R. Judd, RAND Corporation; Cosponsors: Committee on Rock Mechanics, Engineering Geology Division, Geological Society of America and the RAND Corporation.

Sixth Biennial Conference on Carbon—Pittsburgh, Pa.; June 17-21, 1963; Chairman: S. Ergun, Bureau of Mines; Cosponsors: U.S. Bureau of Mines, The American Carbon Committee and Office of Naval Research.

CONFERENCES TO ADVANCE THE SCIENCE OF HYDROLOGY—Monticello, Ill.; June 24-28, 1963; Chairman: William C. Achermann, Section of Hydrology, American Geophysical Union; Cosponsors: American Geophysical Union, National Academy of Sciences—National Research Council.

INTERNATIONAL SYMPOSIUM ON THE THEORY OF MODELS—Berkeley, Calif.; June 25—July 11, 1963; Chairmen: Leon Henkin, Association for Symbolic Logic and Alfred Tarski, Department of Mathematics, University of California, Berkeley; Cosponsors: The Association for Symbolic Logic, The International Union of History and Philosophy of Science, and the National Academy of Sciences—National Research Council.

## ADVANCED SCIENCE SEMINARS

Nonlinear Problems of Continuum Mechanics—University of Delaware, Newark, Del.; June 19-21, 1963; Director: W. F. Ames.

FIELD SCHOOL IN ETHNOLOGY AND LINGUISTICS—University of Oklahoma, Norman, Okla.; June 4-July 28, 1963; Director: William E. Bittle.

RECENT ADVANCES IN CLAY MINERALOGY—Pennsylvania State University, University Park, Pa.; July 30-August 10, 1962; Director: G. W. Brindley.

Institute for Theoretical Physics—University of Colorado, Boulder, Colo.; June 16-August 24, 1963; Director: W. E. Brittin.

SEMINAR FOR GRADUATE STUDENTS IN TOPOLOGY—Brandeis University, Waltham, Mass.; June 24-August 19, 1963; Director: E. H. Brown.

Institute in Marine Science—Bermuda Biological Station; St. George's West, Bermuda; August 1-September 8, 1962; Director: K. E. Chave.

MARINE PALEOECOLOGY—Lehigh University, Bethlehem, Pa.; May 6-9, 1963; Director: K. E. Chave.

CONFERENCE ON LUNAR EXPLORATION—Virginia Polytechnic Institute, Blacksburg, Va.; August 13-17, 1962; Director: J. B. Eades, Jr.

FIELD SCHOOL IN ETHNOGRAPHY ON NEZ PERCE INDIAN RESERVATION—Washington State University, Pullman, Wash.; June 17-August 11, 1963; Director: E. Elmendorf.

THEORETICAL PHYSICS—Brandeis University, Waltham, Mass.; June 11-July 23, 1963; Director: K. W. Ford.

SEMINAR FOR GRADUATE STUDENTS IN MATHEMATICAL ANALYSIS.—Northwestern University, Evanston, Ill.; June 17-August 9, 1963; Director: R. R. Goldberg.

FIELD METHODS FOR SYSTEMATIC VERTEBRATE ZOOLOGISTS AND PALEONTOLOGISTS—University of Kansas, Lawrence, Kans.; June 8-July 28, 1963; Director: E. R. Hall.

ADVANCED COURSES IN ANTHROPOLOGY FOR SCIENCE MUSEUM PERSONNEL—American Association of Museums, Washington, D.C.; June 15-July 27, 1963; Director: E. W. Haury.

FOREST GENETICS WORKSHOP—Southern Forest Tree Improvement Committee, Savannah, Ga.; October 25-27, 1962; Director: J. W. Johnson.

SEMINAR FOR GRADUATE STUDENTS IN ALGEBRA—Pennsylvania State University, University Park, Pa.; June 24-August 19, 1963; Director: D. G. Johnson.

Institute in Observational Astronomy—Harvard College Observatory, Cambridge, Mass.; July 1-September 15, 1962; Director: William Liller.

WINTER INSTITUTES IN QUANTUM CHEMISTRY AND SOLID-STATE PHYSICS—University of Florida, Gainesville, Fla.; December 10-January 19, 1963; Director: Per-Olov Lowdin.

GRADUATE SUMMER COURSES IN NEMATOLOGY—Cornell University, Ithaca, N.Y.; July 1-August 3, 1962; Director: W. F. Mai.

FIELD PROGRAM IN ANTHROPOLOGY—Brandeis University, Waltham, Mass.; June 15-September 15, 1963; Director: R. Manners.

Special Summer Session on Mathematical Methods in Biology—North Carolina State College, Raleigh, N.C.; June 10-July 19, 1963; Director: F. E. McVay.

COMPUTER PROGRAMMING FOR COLLEGE TEACHERS—Agricultural and Mechanical College of Texas, College Station, Tex.; July 16-August 24, 1962; Director: B. C. Moore.

SYMPOSIUM ON LUBRICATION AND WEAR—University of Houston, Houston, Tex.; June 10-28, 1963; Director: D. Muster.

SYMPOSIUM ON MOLECULAR STRUCTURE AND SPECTROSCOPY—Ohio State University Research Foundation, Columbus, Ohio; June 10–14, 1963; Director: H. Nielsen.

SEMINAR IN MARINE SCIENCE—University of Texas, Austin, Tex.; June 15-August 15, 1963; Director: Howard Odum.

COMPUTERS IN ENGINEERING EDUCATION—University of Houston, Houston, Tex.; June 10-August 2, 1963; Director: E. I. Organick.

SIMULATION OF COGNITIVE PROCESSES—Social Sciences Research Council, New York, N.Y.; June 17-July 26, 1963; Director: F. H. Palmer.

International Field Institute in Geology in Scandinavia—National Academy of Sciences—National Research Council, Washington, D.C.; June 27-August 26, 1963; Director: P. H. Reitan.

Two Summer Sessions in Advanced Mathematics—Canadian Mathematical Congress, Montreal, Canada; June 25-August 17, 1963; Director: L. F. S. Ritcey.

Summer Institute in Theoretical Physics—University of Wisconsin, Madison, Wis.; June 15-August 15, 1963; Director: R. G. Sachs.

ADVANCED INSTITUTE IN TROPICAL BIOLOGY—University of Southern California, Los Angeles, Calif.; July 1—August 15, 1962; Director: Jay Savage.

CONFERENCE ON MECHANICAL BEHAVIOR OF WOOD—University of California, Berkeley, Calif.; August 27-September 1, 1962; Director: A. Schniewind.

EDUCATION AND RESEARCH IN TROPICAL FORESTRY—State University College of Forestry at Syracuse, Syracuse, N.Y.; June 10-July 21, 1963; Director: H. L. Shirley.

RECENT ADVANCES IN SYTOGENETICS AND DEVELOPMENTAL GENETICS—American Society of Zoologists, New York, N.Y.; August 27, 1962; Director: Curt Stern.

THEORETICAL STUDIES IN GEOPHYSICAL FLUID DYNAMICS—Woods Hole Oceanographic Institution, Woods Hole, Mass.; June 24-August 30, 1963; Director: G. Veronis.

FIELD INSTITUTE IN ANTHROPOLOGY—Harvard University, Cambridge, Mass.; June 10-September 10, 1963; Director: E. Z. Vogt.

THEORETICAL AND MATHEMATICAL BIOLOGY—Yale University, New Haven, Conn.; January 15-June 1, 1963; Director: Talbot Waterman.