

APPENDIX A

National Science Board, Staff, Committees, and Advisory Panels

NATIONAL SCIENCE BOARD

Terms Expire May 10, 1966

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- E. R. PIRE, Vice President and Chief Scientist, International Business Machines Corporation, Armonk, N.Y.
- WILLIAM W. RUBEY, Professor of Geology and Geophysics, Department of Geology and Institute of Geophysics, University of California, Los Angeles, Calif.
- ERIC A. WALKER (Chairman), President, The Pennsylvania State University, University Park, Pa.

Terms Expire May 10, 1968

- HARVEY BROOKS, Gordon McKay Professor of Applied Physics and Dean of Engineering and Applied Physics, Harvard University, Cambridge, Mass.
- RUFUS E. CLEMENT, President, Atlanta University, Atlanta, Ga.
- HENRY EYRING, Dean, Graduate School, University of Utah, Salt Lake City, Utah
- PHILIP HANDLER (Vice Chairman), James B. Duke Professor and Chairman, Department of Biochemistry, Duke University, Durham, N.C.
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- EDWARD J. MCSHANE, Professor of Mathematics, Department of Mathematics, University of Virginia, Charlottesville, Va.
- EDWARD L. TATUM, Member, The Rockefeller University, New York, N.Y.
- RALPH W. TYLER, Director, Center for Advanced Study in the Behavioral Sciences, Stanford, Calif.

Terms Expire May 10, 1970

- *MARY I. BUNTING, President, Radcliffe College, Cambridge, Mass.
H. E. CARTER, Head, Department of Chemistry and Chemical Engineering, University of Illinois, Urbana, Ill.
JULIAN R. GOLDSMITH, Associate Dean, Division of the Physical Sciences, University of Chicago, Chicago, Ill.
WILLIAM W. HAGERTY, President, Drexel Institute of Technology, Philadelphia, Pa.
*HARVEY PICKER, President, Picker X-Ray Corp., White Plains, N.Y.
MINA S. REES, Dean of Graduate Studies, The City University of New York, New York, N.Y.
JULIUS A. STRATTON, President, Massachusetts Institute of Technology, Cambridge, Mass.
F. P. THIEME, Vice President, University of Washington, Seattle, Wash.

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VERNICE ANDERSON, Secretary, National Science Board, National Science Foundation, Washington, D.C.

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*Appointed on July 31, 1965.

**As of November 1965.

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<i>Program Director for:</i>	
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<i>Genetic Biology</i> -----	HERMAN W. LEWIS
<i>Section Head for Environmental and Systematic Biology</i> -----	WALTER H. HODGE
<i>Program Director for:</i>	
<i>Environmental Biology</i> -----	JOHN E. CANTLON
<i>Systematic Biology</i> -----	WALTER H. HODGE (Acting)
<i>Section Head for Molecular Biology</i> ---	(Vacant)
<i>Program Director for:</i>	
<i>Biochemistry</i> -----	(Vacant)
<i>Biophysics</i> -----	R. BRUCE MARTIN
<i>Section Head for Physiological Processes</i> -----	DAVID B. TYLER
<i>Program Director for:</i>	
<i>Regulatory Biology</i> -----	DAVID B. TYLER (Acting)
<i>Metabolic Biology</i> -----	EUGENE L. HESS
<i>Program Director for:</i>	
<i>Psychobiology</i> -----	HENRY S. ODBERT
<i>Facilities and Special Programs</i> -----	JACK T. SPENCER

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<i>Engineering Energetics</i> -----	ROYAL E. ROSTENBACH
<i>Engineering Materials</i> -----	ISRAEL WARSHAW
<i>Engineering Mechanics</i> -----	MICHAEL P. GAUS
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Section Head for Institutional Development—Continued

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Program Director for:
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Radio Astronomy----- EVERETT H. HURLBURT
Section Head for Atmospheric Sciences----- EARL G. DROESSLER
Executive Secretary for:
Interdepartmental Committee for
Atmospheric Sciences----- SHERMAN W. BETTS
Commission on Weather Modi-
fication ----- JACK C. OPPENHEIMER
Program Director for:
Aeronomy----- (Vacant)
Meteorology----- FRED D. WHITE
Solar Terrestrial Research----- ROBERT FLEISCHER
Weather Modification----- PETER H. WYCKOFF
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Program Director for:
Inorganic and Analytical Chem-
istry ----- OREN F. WILLIAMS
Organic Chemistry----- (Vacant)
Physical Chemistry----- (Vacant)

Division Director—Continued

<i>Section Head for Earth Sciences</i> -----	WILLIAM E. BENSON
<i>Program Director for:</i>	
<i>Geochemistry</i> -----	ALVIN VAN VALKENBURG
<i>Geology</i> -----	RICHARD G. RAY
<i>Geophysics</i> -----	ROY E. HANSON
<i>Oceanography</i> -----	RICHARD G. BADER
<i>Section Head for Mathematical Sciences</i> -----	MILTON E. ROSE
<i>Program Director for:</i>	
<i>Algebra and Topology</i> -----	RALPH M. KRAUSE
<i>Analysis, Foundations, and Geometry</i> -----	MATTHEW P. GAFFNEY, JR.
<i>Applied Mathematics and Statistics</i> -----	WILLIAM H. PELL
<i>Computer Science</i> -----	(Vacant)
<i>Section Head for Physics</i> -----	WAYNE R. GRUNER
<i>Program Director for:</i>	
<i>Atomic and Molecular Physics</i> ---	(Vacant)
<i>Elementary Particle Physics</i> -----	J. HOWARD McMILLEN
<i>Elementary Particle Physics Facilities</i> -----	JEROME H. FREGEAU
<i>Nuclear Physics</i> -----	WILLIAM S. RODNEY
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<i>Theoretical Physics</i> -----	HENRY S. VALK

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<i>Economics</i> -----	HOWARD W. NICHOLSON
<i>Sociology and Social Psychology</i> ----	CARL W. BACKMAN
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<i>International Cooperation and Information</i> -----	HENRY S. FRANCIS, JR.

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<i>College Science Curriculum Improvement</i> -----	JOHN MAYS
<i>Special Projects</i> -----	RICHARD E. PAULSON

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<i>Faculty and Postdoctoral Fellowships</i> -----	HAROLD R. VOORHEES
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<i>Program Director for Advanced Science Education</i> -----	(Vacant)

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Student and Cooperative Programs ----- HOWARD J. HAUSMAN

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<i>Nonacademic Research Institutions Studies</i>	RICHARD M. BERRY
<i>Intersectoral Studies and Trends</i>	KATHRYN S. ARNOW

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<i>Publications Support</i>	GORDON B. WARD (Acting)
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<i>Head, Data Collection and Publications Unit</i>	RALPH H. SULLIVAN
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<i>Federal Science Information</i>	SEYMOUR I. TAINE
<i>Domestic and Foreign Science Information</i>	(Vacant)

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<i>United States-Japan Cooperative Science</i> -----	RICHARD R. RIES
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<i>Head, Program Development and Analysis Staff</i> -----	ROBERT F. HULL
<i>NSF/Tokyo</i>	
<i>Head</i> -----	J. E. O'CONNELL (Acting)
<i>Staff Associate</i> -----	M. DALE ARVEY
<i>NSF/San Jose Head</i> -----	DUNCAN CLEMENT

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<i>Public Information Officer</i> -----	ROLAND D. PAINE, Jr.

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<i>Deputy Administrative Manager</i> -----	HENRY BIRNBAUM
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<i>Head, Grants Office</i> -----	WILLIAM E. FEE, Jr.
<i>Head, Office Services</i> -----	HOWARD TIHLA
<i>Personnel Officer</i> -----	CALVIN C. JONES

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<i>Comptroller</i> -----	AARON ROSENTHAL
<i>Deputy Comptroller and Budget Officer</i> -----	LUTHER F. SCHOEN
<i>Finance Officer</i> -----	EDWARD B. GARVEY
<i>Head, Internal Audit Office</i> -----	WILFORD G. KENER
<i>Head, Indirect Cost (Rate) Determination Office</i> -----	LOUIS SIEGEL (Acting)

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Theodore H. Bullock, Department of Zoology, University of California, Los Angeles, Calif.

Harry Eagle, Albert Einstein School of Medicine, Yeshiva University, New York, N.Y.

James D. Ebert, Department of Embryology, Carnegie Institution of Washington, Baltimore, Md.

E. A. Evans, Jr., Department of Biochemistry, University of Chicago, Chicago, Ill.

Paul J. Kramer, Department of Botany, Duke University, Durham, N.C.

William D. Lotspeich, Department of Physiology, School of Medicine and Dentistry, University of Rochester, Rochester, N.Y.

Ernst Mayr, Museum of Comparative Zoology, Harvard University, Cambridge, Mass.

Conrad G. Mueller, Jr., Department of Psychology, Columbia University, New York, N.Y.

Marcus Rhoades, Department of Botany, Indiana University, Bloomington, Ind.

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Walter R. Hibbard, Manager, Metallurgy and Ceramics Research, General Electric Co., Schenectady, N.Y.

Thomas F. Jones, President, University of South Carolina, Columbia, S.C.

William R. Marshall, Jr. (Chairman), Associate Dean, College of Engineering, University of Wisconsin, Madison, Wis.

Charles L. McCabe, Dean, Graduate Studies, College of Engineering and Sciences, Carnegie Institute of Technology, Pittsburgh, Pa.

Clark B. Millikan, Director, Graduate Aeronautical Laboratories, California Institute of Technology, Pasadena, Calif.

Glenn Murphy, Head, Department of Nuclear Engineering, Iowa State University, Ames, Iowa.

Nathan M. Newmark, Head, Department of Civil Engineering, University of Illinois, Urbana, Ill.

Max S. Peters, Dean, College of Engineering, University of Colorado, Boulder, Colo.

William G. Shepherd, Vice President for Academic Administration, University of Minnesota, Minneapolis, Minn.

William E. Shoupp, Vice President and General Manager, Research Laboratories, Atomic Power Department, Westinghouse Electric Corp., Pittsburgh, Pa.

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Bryce Low Crawford, Jr., Dean, Graduate School, University of Minnesota, Minneapolis, Minn.

John Ray Dunning, Dean, School of Engineering and Applied Science, Columbia University, New York, N.Y.

Clifford M. Hardin, Chancellor, University of Nebraska, Lincoln, Nebr.

Douglas M. Knight, President, Duke University, Durham, N.C.

Emil M. Mrak, Chancellor, University of California (Davis), Davis, Calif.

Frank William Putnam (Chairman), Head, Department of Biochemistry, College of Medicine, University of Florida, Gainesville, Fla.

Clarence Scheps, Vice President-Comptroller, Tulane University of Louisiana, New Orleans, La.

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Charles B. Hunt, Department of Geography, Johns Hopkins University, Baltimore, Md.

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Frederick T. Wall, Department of Chemistry, University of California, Santa Barbara, Calif.

Fred L. Whipple, Director, Astrophysical Observatory, Harvard University, Cambridge, Mass.

Raymond L. Wilder, Research Professor of Mathematics, Department of Mathematics, University of Michigan, Ann Arbor, Mich.

Robert R. Wilson, Director, Laboratory of Nuclear Studies, Cornell University, Ithaca, N.Y.

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Dael Wolfe, Executive Officer, American Association for the Advancement of Science, Washington, D.C.

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Laurence Irving, Director, Institute of Arctic Biology, University of Alaska, College, Alaska.

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John W. Kendrick, Professor of Economics, George Washington University, Washington, D.C.

Wayne E. Kuhn, Portland, Oreg.

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John W. McConnell, President, University of New Hampshire, Durham, N.H.

Albert Rubenstein, Professor of Industrial Engineering, Northwestern University, Evanston, Ill.

Gardiner L. Tucker, Director of Research, International Business Machines Corp., Yorktown Heights, N. Y.

Ralph J. Watkins (Chairman), Vice President, Surveys and Research Corp., Washington, D.C.

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Ralph C. M. Flynt, Associate Commissioner for Educational Research and Development, U.S. Office of Education, Washington, D.C.

Joel D. Griffing, Chief Planning Officer, Selective Service System, Washington, D.C.

Albert Kay, Director of Manpower Resources, Office of Assistant Secretary of Defense (Manpower), The Pentagon, Washington, D.C.
Thomas J. Mills (Chairman), Head, Manpower and Education Studies Section, Office of Economic and Manpower Studies, National Science Foundation, Washington, D.C.

Joseph S. Murtaugh, Chief, Office of Program Planning, National Institutes of Health, Department of Health, Education, and Welfare, Bethesda, Md.

Richard A. Prindle, Chief, Division of Public Health Methods, Office of Surgeon General, Public Health Service, Washington, D.C.

Oscar Smith, Director, Division of Labor Relations, Atomic Energy Commission, Washington, D.C.

O. Glenn Stahl, Director, Bureau of Programs and Standards, Civil Service Commission, Washington, D. C.

Conrad Taeuber, Assistant Director, Bureau of the Census, Department of Commerce, Washington. D.C.

Seymour Wolfbein, Special Assistant to the Secretary for Economic Affairs, Department of Labor, Washington, D.C.

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Julian H. Bigelow, School of Mathematics, The Institute for Advanced Study, Princeton, N.J.

Launor F. Carter, Senior Vice-President, Research and Technology Division, System Development Corp., Santa Monica, Calif.

Martin M. Cummings, Director, National Library of Medicine, Department of Health, Education, and Welfare, Washington, D.C.

Merrill M. Flood, University of Michigan, Mental Health Research Institute, Ann Arbor, Mich.

Thomas F. Jones, Jr., President, University of South Carolina, Columbia, S.C.

Henry C. Longnecker, Manager, Science Information Department, Research and Development Division, Smith, Kline, and French Laboratories, Philadelphia, Pa.

Thomas F. Malone, Director of Research, The Travelers Insurance Co. Hartford, Conn.

Foster E. Mohrhardt, Director, National Agricultural Library, U.S. Department of Agriculture, Washington, D.C.

Harry R. Most, President, W. B. Saunders, Co., Philadelphia, Pa.

L. Quincy Mumford, The Librarian of Congress, Washington, D.C.

Derek J. de Solla Price, Avalon Professor of History of Science, Yale University, New Haven, Conn.

- Ralph R. Shaw, Dean of Library Activities, University of Hawaii, Honolulu, Hawaii.
- R. H. Shryock, Professor of History, University of Pennsylvania, Library, American Philosophical Society, Philadelphia, Pa.
- Henry B. Steinbach, Chairman, Department of Zoology, University of Chicago, Chicago, Ill.
- Don R. Swanson, Dean of the Graduate Library School, Harper Memorial Library, University of Chicago, Chicago, Ill.
- Raymond K. Wakerling, Director, Technical Information Division, Lawrence Radiation Laboratory, University of California, Berkeley, Calif.
- Thomas J. Wilson, Director, Harvard University Press, Cambridge, Mass.

Commission on Weather Modification

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- William C. Colman, Executive Director, Advisory Commission on Intergovernmental Relations, Washington, D.C.
- John C. Dreier, Visiting Professor of Latin American Affairs, School of Advanced International Studies, Johns Hopkins University, Washington, D.C.
- Leonid Hurwicz, Department of Economics, University of Minnesota, Minneapolis, Minn.
- Thomas A. Malone, Second Vice President, Research Department, Travelers Insurance Co., Hartford, Conn.
- John Bardeen, Department of Physics, University of Illinois, Urbana, Ill.
- Arthur W. Murphy, Professor of Law, Columbia University Law School, New York, N.Y.
- Sumner T. Pike, Vice President, The Trident Packing Co., Inc., Lubec, Maine
- William S. von Arx, Woods Hole Oceanographic Institution, Woods Hole, Mass.
- Gilbert F. White, Department of Geography, University of Chicago, Chicago, Ill.
- Karl M. Wilbur, Department of Zoology, Duke University, Durham, N.C.

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Harry W. Basehart, Department of Anthropology, University of New Mexico, Albuquerque, N. Mex.

Frederick Johnson, R. S. Peabody Foundation for Archaeology, Phillips Academy, Andover, Mass.

Herbert H. Paper, Department of Linguistics, University of Michigan, Ann Arbor, Mich.

Lauriston Sharp, Department of Anthropology, Cornell University, Ithaca, N.Y.

Raymond H. Thompson, Department of Anthropology, University of Arizona, Tucson, Ariz.

Advisory Panel for Astronomy

(Chairman: Dr. Geoffrey R. Burbidge)

Radio Astronomy

Frederick T. Haddock, Jr., The Observatory, University of Michigan, Ann Arbor, Mich.

A. Edward Lilley, Harvard College Observatory, Cambridge, Mass.

Edward F. McClain, U.S. Naval Research Laboratory, Washington, D.C.

Optical Astronomy

Russell Grant Athay, University of Utah, Salt Lake City, Utah

Geoffrey R. Burbidge, University of California, La Jolla, Calif.

Armin J. Deutsch, Mt. Wilson and Palomar Observatories, Pasadena, Calif.

Bengt G. Stromgren, Institute for Advanced Study, Princeton University, Princeton, N.J.

Merle F. Walker, Lick Observatory, University of California, Mt. Hamilton, Calif.

Marshal H. Wrubel, Geothe Link Observatory, Indiana University, Bloomington, Ind.

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Herbert Friedman, Atmosphere and Astrophysics Division, Naval Research Laboratory, Washington, D.C.

Richard M. Goody (Chairman), Department of Engineering and Applied Physics, Harvard University, Cambridge, Mass.

Francis S. Johnson, Graduate Research Center, Dallas, Tex.

Cecil E. Leith, Jr., Lawrence Radiation Laboratory, University of California, Livermore, Calif.

Advisory Panel for Chemistry

William G. Dauben, Department of Chemistry, University of California, Berkeley, Calif.

William Eberhardt, School of Chemistry, Georgia Institute of Technology, Atlanta, Ga.

H. S. Gutowsky, Department of Chemistry, University of Illinois, Urbana, Ill.

George S. Hammond (chairman), Department of Chemistry, California Institute of Technology, Pasadena, Calif.

- Harold Hart, Department of Chemistry, Michigan State University, East Lansing, Mich.
- Jacob Kleinberg, Department of Chemistry, University of Kansas, Lawrence, Kans.
- Kurt Mislow, Department of Chemistry, Princeton University, Princeton, N.J.
- George Morrison, Department of Chemistry, Cornell University, Ithaca, N.Y.
- B. S. Rabinovitch, Department of Chemistry, University of Washington, Seattle, Wash.
- L. B. Rogers, Department of Chemistry, Purdue University, Lafayette, Ind.
- Harrison Shull, Department of Chemistry, Indiana University, Bloomington, Ind.
- Henry Taube, Department of Chemistry, Stanford University, Stanford, Calif.
- Advisory Panel for Developmental Biology*
- Robert Auerbach, Department of Zoology, University of Wisconsin, Madison, Wis.
- Paul B. Green, Department of Cytology, Dartmouth Medical School, Hanover, N.H.
- Paul A. Marks, College of Physicians and Surgeons, Columbia University, New York, N.Y.
- Keith R. Porter, The Biological Laboratories, Harvard University, Cambridge, Mass.
- David M. Prescott, Department of Anatomy, University of Colorado Medical Center, Denver, Colo.
- John W. Saunders, Jr., Department of Biology, Marquette University, Milwaukee, Wis.
- Herbert Stern, Department of Botany, University of Illinois, Urbana, Ill.
- Alfred Sussman, Department of Botany, University of Michigan, Ann Arbor, Mich.
- Advisory Panel for Earth Sciences*
- Bruce B. Benson, Department of Physics, Amherst College, Amherst, Mass.
- Wayne V. Burt, Department of Oceanography, Oregon State University, Corvallis, Oreg.
- Richard R. Doell, Geophysics Branch, U.S. Geological Survey, Menlo Park, Calif.
- Albert E. J. Engel, Department of Earth Sciences, University of California, San Diego, La Jolla, Calif.
- Richard H. Jahns (Chairman), Division of Earth Sciences, Pennsylvania State University, University Park, Pa.
- J. Hoover Mackin, Department of Geology, University of Texas, Austin, Tex.
- Jack E. Oliver, Lamont Geological Observatory, Columbia University, Palisades, N.Y.
- Donald W. Pritchard, Chesapeake Bay Institute, The Johns Hopkins University, Baltimore, Md.
- John F. Schairer, Geophysical Laboratory, Carnegie Institution of Washington, Washington, D.C.
- Henry C. Thomas, Department of Chemistry, University of North Carolina, Chapel Hill, N.C.
- George A. Thompson, Department of Geophysics, Stanford University, Stanford, Calif.
- George W. Wetherill, Institute of Geophysics and Planetary Phys-

ics, University of California, Los Angeles, Calif.

Advisory Panel for Economics

Robert E. Baldwin, Department of Economics, University of Wisconsin, Madison, Wis.

Richard A. Easterlin, Department of Economics, University of Pennsylvania, Philadelphia, Pa.

William L. Garrison, Department of Geography, Northwestern University, Evanston, Ill.

John A. Nordin, Department of Economics, Kansas State University, Manhattan, Kans.

Roy Radner, Department of Economics, University of California, Berkeley, Calif.

Daniel B. Suits, Department of Economics, University of Michigan, Ann Arbor, Mich.

Advisory Panel for Environmental Biology

George Bartholomew, Department of Zoology, University of California, Los Angeles, Calif.

Edward W. Fager, Scripps Institution of Oceanography, University of California (San Diego), La Jolla, Calif.

Donald S. Farner, Department of Zoology, Washington State University, Pullman, Wash.

Robert F. Inger, Chicago Natural History Museum, Chicago, Ill.

D. A. Livingstone, Department of Zoology, Duke University, Durham, N.C.

Robert B. Platt, Department of Biology, Emory University, Atlanta, Ga.

Gordon Riley, Bingham Oceanographic Laboratory, Yale University, New Haven, Conn.

George Sprugel, Jr., Chief, Natural Sciences Division, U.S. National Park Service, Washington, D.C.

Robert Harding Whittaker, Brookhaven National Laboratory, Associated Universities, Inc., Upton, Long Island, N.Y.

Edward O. Wilson, Biological Laboratories, Harvard University, Cambridge, Mass.

Advisory Panel for Genetic Biology

Walter Bodmer, Department of Genetics, Stanford University Medical School, Palo Alto, Calif.

Sterling Emerson, Division of Biology, California Institute of Technology, Pasadena, Calif.

Ellis Englesberg, Department of Biological Sciences, University of Pittsburgh, Pittsburgh, Pa.

Samson Gross, Department of Microbiology, Duke University, Durham, N.C.

John Laughnan, Department of Botany, University of Illinois, Urbana, Ill.

Richard Lewontin, Department of Zoology, University of Chicago, Chicago, Ill.

Laurence Sandler, Department of Genetics, University of Washington, Seattle, Wash.

J. Herbert Taylor, Institute of Molecular Biophysics, Florida State University, Tallahassee, Fla.

Norton Zinder, The Rockefeller Institute, New York, N.Y.

Advisory Panel for Graduate Science Facilities

The Rev. Victor J. Blum, S.J., Dean, Institute of Technology, Saint Louis University, St. Louis, Mo.

- Lawrence Bogorad, Department of Botany, University of Chicago, Chicago, Ill.
- George E. Dieter, Jr., Drexel Institute of Technology, Chairman, Metallurgical Engineering Department, Philadelphia, Pa.
- Malcolm Dole, Materials Research Center, Technological Institute, Northwestern University, Evanston, Ill.
- Henry A. Fairbank, Chairman, Department of Physics, Duke University, Durham, N.C.
- Chauncey G. Goodchild, Chairman, Department of Biology, Emory University, Atlanta, Ga.
- John L. Kennedy, Chairman, Department of Psychology, Princeton University, Princeton, N.J.
- David A. Lind, Department of Physics, University of Colorado, Boulder, Colo.
- Richard S. Pierce, Department of Mathematics, University of Washington, Seattle, Wash.
- Sydney C. Rittenberg, Department of Bacteriology, University of California, Los Angeles, Calif.
- Paul E. Russell, Dean of Engineering, Kansas State University, Manhattan, Kans.
- Albert C. Spaulding, Chairman, Department of Anthropology, University of Oregon, Eugene, Oreg.
- Advisory Panel for History and Philosophy of Science*
- Carl G. Hempel, Department of Philosophy, Princeton University, Princeton, N.J.
- Gerald Holton, Jefferson Physical Laboratory, Harvard University, Cambridge, Mass.
- Ernan McMullin, Center for Philosophy of Science, University of Minnesota, Minneapolis, Minn.
- Richard S. Rudner, Department of Philosophy, Washington University, St. Louis, Mo.
- Robert E. Schofield, Department of Humanities, Case Institute of Technology, Cleveland, Ohio.
- L. Pearce Williams, Department of History, Cornell University, Ithaca, N.Y.
- Advisory Panel for the International Year of the Quiet Sun*
- Kinsey Anderson, Space Sciences Laboratory, University of California, Berkeley, Calif.
- R. Grant Athay, Chairman, Department of Physics, University of Utah, Salt Lake City, Utah
- Joseph W. Chamberlain, Space Division, Kitt Peak National Observatory, Tucson, Ariz.
- Herbert Friedman (Chairman), Atmosphere and Astrophysics Division, Naval Research Laboratory, Washington, D.C.
- Fred T. Haddock, Jr., The Observatory, University of Michigan, Ann Arbor, Mich.
- Joseph Kaplan, Department of Geophysics, University of California, Los Angeles, Calif.
- William W. Kellogg, The RAND Corp., Santa Monica, Calif.
- Peter Meyer, Enrico Fermi Institute for Nuclear Studies, University of Chicago, Chicago, Ill.
- Martin A. Pomerantz, Bartol Research Foundation, Swarthmore, Pa.
- E. H. Vestine, The RAND Corp., Santa Monica, Calif.
- A. H. Waynick, Pennsylvania State University, University Park, Pa.

Advisory Panel for Mathematical Sciences

Maurice Auslander, Department of Mathematics, Brandeis University, Waltham, Mass.

Paul T. Bateman, Department of Mathematics, University of Illinois, Urbana, Ill.

R. H. Bing, Department of Mathematics, University of Wisconsin, Madison, Wis.

Shing S. Chern, Department of Mathematics, University of California, Berkeley, Calif.

Herman Chernoff, Department of Statistics, Stanford University, Stanford, Calif.

Jurgen K. Moser, Courant Institute of Mathematical Sciences, New York University, New York, N.Y.

George D. Mostow, Department of Mathematics, Yale University, New Haven, Conn.

Elias M. Stein, Department of Mathematics, Princeton University, Princeton, N.J.

Alexander D. Wallace, Department of Mathematics, University of Florida, Gainesville, Fla.

Advisory Panel for Metabolic Biology

Samuel P. Bessman, University Hospital, University of Maryland, Baltimore, Md.

Gene M. Brown, Department of Biology, Massachusetts Institute of Technology, Cambridge, Mass.

Ernest Bueding, Department of Pathobiology, Johns Hopkins University, School of Hygiene and Public Health, Baltimore, Md.

Harold J. Evans, Department of Plant Physiology, Oregon State University, Corvallis, Oreg.

Howard Gest, Adolphus Busch III Laboratory of Molecular Biology, Washington University, St. Louis, Mo.

Wayne C. Hall, Dean of Graduate School, Texas A. & M. University, College Station, Tex.

James A. Olson, Department of Biochemistry, University of Florida, College of Medicine, Gainesville, Fla.

Jack L. Strominger, Department of Pharmacology and Toxicology, University of Wisconsin, Madison, Wis.

Howard J. Teas, Head, Division of Biological Sciences, University of Georgia, Athens, Ga.

Advisory Panel for Molecular Biology

Sam Aronoff, Department of Biochemistry and Biophysics, Iowa State University, Ames, Iowa

Howard M. Dintzis, Department of Biophysics, Johns Hopkins University, Baltimore, Md.

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David S. Hogness, Department of Biochemistry, Stanford University, Stanford, Calif.

Shinya Inoue, Professor of Cytology, Dartmouth Medical School, Hanover, N.H.

William P. Jencks, Department of Biochemistry, Brandeis University, Waltham, Mass.

Walter Kauzmann, Department of Chemistry, Princeton University, Princeton, N.J.

Daniel Tosteson, Department of Physiology, Duke University, Durham, N.C.

Advisory Panel for Oceanographic Facilities

William M. Cameron, Director of Mineral Sciences, Department of Mines and Technical Surveys, Ottawa, Ontario, Canada

Eugenie Clark, Cape Haze Marine Laboratory, Sarasota, Fla.

Parke A. Dickey, Department of Geology, University of Tulsa, Tulsa, Okla.

John Lyman, Bureau of Commercial Fisheries, Department of Interior, Washington, D.C.

Arthur E. Maxwell, Head, Office of Naval Research, Geophysics Branch, Washington, D.C.

Warren C. Thompson, Department of Meteorology and Oceanography, U.S. Naval Postgraduate School, Monterey, Calif.

Advisory Panel for Physics

Hans Frauenfelder, Department of Physics, University of Illinois, Urbana, Ill.

David H. Frisch, Department of Physics, Massachusetts Institute of Technology, Cambridge, Mass.

Lawson M. McKenzie, Scientific Laboratory, Ford Motor Company, Dearborn, Mich.

Elliott Montroll (chairman), Institute for Defense Analysis, Washington, D.C.

Robert Novick, Department of Physics, Columbia University, New York, N.Y.

George E. Pake, Washington University, St. Louis, Mo.

Gerald C. Phillips, Department of Physics, Rice University, Houston, Tex.

Stuart A. Rice, Institute for the Study of Metals, University of Chicago, Chicago, Ill.

Michael Tinkham, Department of Physics, University of California, Berkeley, Calif.

John S. Toll, Department of Physics, University of Maryland, College Park, Md.

William D. Walker, Department of Physics, University of Wisconsin, Madison, Wis.

Advisory Panel for Psychobiology

Norman H. Anderson, Department of Psychology, University of California, Los Angeles, Calif.

E. James Archer, Department of Psychology, University of Wisconsin, Madison, Wis.

Donald S. Blough, Department of Psychology, Brown University, Providence, R.I.

William C. Dilger, Laboratory of Ornithology, Cornell University, Ithaca, N.Y.

Donald R. Griffin, Department of Biology, Harvard University, Cambridge, Mass.

Harold W. Hake, Department of Psychology, University of Illinois, Urbana, Ill.

Frederick A. King, Division of Neurosurgery, College of Medicine, University of Florida, Gainesville, Fla.

Herschel W. Leibowitz, Department of Psychology, Pennsylvania State University, University Park, Pa.

*Advisory Panel for Radio
Telescopes*

- Ronald N. Bracewell, Radio Science Laboratory, Stanford University, Stanford, Calif.
Bernard F. Burke, Carnegie Institution of Washington, Washington, D.C.
Paul Chenea, Division of Engineering Sciences, Purdue University, Lafayette, Ind.
L. J. Chu, Department of Electrical Engineering, Massachusetts Institute of Technology, Cambridge, Mass.
Richard M. Emberson, Institute of Electrical and Electronic Engineers, Inc., New York, N.Y.
William E. Gordon, Department of Electrical Engineering, Cornell University, Ithaca, N.Y.
David S. Heeschen, National Radio Astronomy Observatory, Green Bank, W. Va.
R. Minkowski, Radio Astronomy Observatory, University of California, Berkeley, Calif.
John R. Pierce (Chairman), Bell Telephone Laboratories, Inc., Murray Hill, N.J.
George W. Swenson, Jr., The Observatory, University of Illinois, Urbana, Ill.
James H. Trexler, Naval Research Laboratory, Washington, D.C.

*Advisory Panel for Regulatory Bi-
ology*

- Ira L. Baldwin, University of Wisconsin, Madison, Wis.
David W. Bishop, Department of Embryology, Carnegie Institution of Washington, Baltimore, Md.

- Dietrich Bodenstein, Department of Biology, University of Virginia, Charlottesville, Va.
Albert E. Dimond, Connecticut Agricultural Experiment Station, New Haven, Conn.
Gilbert H. Mudge, Dartmouth Medical School, Hanover, N.H.
George Sayers, Department of Physiology, Western Reserve University, School of Medicine, Cleveland, Ohio
Carroll A. Swanson, Department of Botany and Plant Pathology, Ohio State University, Columbus, Ohio
A. Van Harreveld, Division of Biology, California Institute of Technology, Pasadena, Calif.

*Advisory Panel for Science Devel-
opment*

- Carl W. Borgmann, Director, Program in Science and Engineering, The Ford Foundation, New York, N.Y.
Robert R. Brode, Professor of Physics, University of California, Berkeley, Calif.
Dale R. Corson, Provost, Cornell University, Ithaca, N.Y.
Colgate W. Darden, Jr., Norfolk, Va.
James D. Ebert, Director, Department of Embryology, Carnegie Institution of Washington, Baltimore, Md.
William B. Harrell, Vice President, Special Projects, The University of Chicago, Chicago, Ill.
Lyle H. Lanier, Executive Vice President and Provost, University of Illinois, Urbana, Ill.
John R. Pierce, Executive Director, Research Communications Prin-

ciples and Communications System Division, Bell Telephone Laboratories, Inc., Murray Hill, N.J.

Advisory Panel for Sociology and Social Psychology

James A. Davis, National Opinion Research Center, University of Chicago, Chicago, Ill.

Albert H. Hastorf, Department of Psychology, Stanford University, Stanford, Calif.

Alan C. Kerckhoff, Department of Sociology and Anthropology, Duke University, Durham, N.C.

Gardner Lindzey, Department of Psychology, University of Texas, Austin, Tex.

William J. McGuire, Department of Social Psychology, Columbia University, New York, N.Y.

James G. March, Dean of Social Sciences, University of California, Irvine, Calif.

Albert J. Reiss, Department of Sociology, University of Michigan, Ann Arbor, Mich.

George J. Suci, Department of Child Development and Family Relationships, Cornell University, Ithaca, N.Y.

Advisory Panel for Specialized Facilities

George Anastos, Department of Zoology, University of Maryland, College Park, Md.

Sanford S. Atwood, President, Emory University, Atlanta, Ga.

S. F. Carson, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tenn.

Leslie A. Chambers, Director, Hancock Foundation, University of

Southern California, Los Angeles, Calif.

Vernon I. Cheadle, Chancellor, University of California, Santa Barbara, Calif.

Eugene F. Corcoran, The Marine Laboratory, Institute of Marine Science, University of Miami, Miami, Fla.

Jerome Cox, Jr., Central Institute for the Deaf, St. Louis, Mo.

Robert K. Enders, Department of Biology, Swarthmore College, Swarthmore, Pa.

George A. Feigen, School of Medicine, Stanford University, Stanford, Calif.

Robert L. Fernald, Department of Zoology, University of Washington, Seattle, Wash.

Jeffery D. Frautschy, Scripps Institution of Oceanography, University of California, La Jolla, Calif.

Herbert Friedmann, Los Angeles County Museum, Los Angeles, Calif.

Shelby Gerking, Department of Zoology, Indiana University, Bloomington, Ind.

Cadet Hand, Director, Bodega Marine Laboratory, Berkeley, Calif.

Earl S. Herald, California Academy of Science, Golden Gate Park, San Francisco, Calif.

Theodore H. Hubbell, Museum of Zoology, University of Michigan, Ann Arbor, Mich.

F. F. Koczy, The Marine Laboratory, University of Miami, Miami, Fla.

Harlan Lewis, Dean of Life Sciences, University of California, Los Angeles, Calif.

- Emil M. Mrak, Chancellor, University of California, Davis, Calif.
- William Duwayne Neff, Department of Psychology, Indiana University, Bloomington, Ind.
- Geoffrey Norman, Vice President for Research, University of Michigan, Ann Arbor, Mich.
- John L. Patterson, Department of Medicine, Medical College of Virginia, Richmond, Va.
- Daniel C. Pease, Department of Anatomy, University of California, School of Medicine, Los Angeles, Calif.
- Luigi Provasoli, Haskins Laboratories, New York, N.Y.
- Edward C. Raney, Department of Conservation, Cornell University, Ithaca, N.Y.
- Carl D. Riggs, Department of Zoology, University of Oklahoma, Norman, Okla.
- J. David Robertson, Research Laboratory, McLean Hospital, Belmont, Mass.
- Murray D. Rosenberg, The Rockefeller Institute, New York, N.Y.
- John H. Ryther, Woods Hole Oceanographic Institution, Woods Hole, Mass.
- Thomas T. Sandel, Massachusetts Institute of Technology, Center Development Office, Cambridge, Mass.
- Seymour Shapiro, Head, Botany Department, University of Massachusetts, Amherst, Mass.
- Albert C. Smith, Director of Research, University of Hawaii, Honolulu, Hawaii
- Athelstan F. Spilhaus, Institute of Technology, University of Minnesota, Minneapolis, Minn.
- Albert Tyler, Department of Embryology, California Institute of Technology, Pasadena, Calif.
- Stanley Watson, Woods Hole Oceanographic Institution, Woods Hole, Mass.
- Karl M. Wilbur, Department of Zoology, Duke University, Durham, N.C.
- Advisory Panel for Systematic Biology*
- Constantine J. Alexopoulos, Department of Botany, University of Texas, Austin, Tex.
- Frederick M. Bayer, Institute of Marine Science, Miami, Fla.
- Kenton L. Chambers, Department of Botany and Plant Pathology, Oregon State University, Corvallis, Ore.
- Arthur J. Cronquist, New York Botanical Garden, Bronx Park, New York, N.Y.
- Joel W. Hedgpeth, Pacific Marine Station, Dillon Beach, Marin County, Calif.
- Terry W. Johnson, Department of Botany, Duke University, Durham, N.C.
- Charles D. Michener, Department of Entomology, University of Kansas, Lawrence, Kans.
- George S. Myers, Division of Systematic Biology, Stanford University, Stanford, Calif.
- Everett C. Olson, Department of Geology, University of Chicago, Chicago, Ill.
- Charles G. Sibley, Department of Conservation, Cornell University, Ithaca, N.Y.
- James A. Slater, Department of Zoology and Entomology, University of Connecticut, Storrs, Conn.

Franklin Sogandares, Department of Zoology, Tulane University, New Orleans, La.

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Advisory Panel for University Computing Facilities

William F. Atchison, Head, Rich Electronic Computer Center, Georgia Institute of Technology, Atlanta, Ga.

Mary A. B. Brazier, Brain Research Institute, University of California, Los Angeles, Calif.

Sidney Fernbach, Lawrence Radiation Laboratory, Livermore, Calif.

Joseph O. Hirschfelder, Department of Chemistry, University of Wisconsin, Madison, Wis.

Nathan M. Newmark (Chairman), Department of Civil Engineering, University of Illinois, Urbana, Ill.

Arthur H. Rosenfeld, Massachusetts Institute of Technology, Cambridge, Mass.

William R. Sears, Director, Center for Applied Mathematics, Cornell University, Ithaca, N.Y.

Leonard M. Uhr, Mental Health Research Institute, University of Michigan, Ann Arbor, Mich.

Willis H. Ware, Rand Corporation, Santa Monica, Calif.

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Advisory Panel for Weather Modification

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Dean F. Peterson, Jr. (Chairman), Utah State University, Logan, Utah

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