NEWS *and Notes*

Late Friday, March 7, the Interstate and Foreign Commerce Committee of the House ended the current hearings on the National Science Foundation Bills. A score of witnesses presented testimony, some urging that the four House Bills, 1815, 1830, 1834, and 2027, which are identical with the Senate measure, S. 526, analyzed last week in *Science*, be adopted. Others, particularly those representing the administration, seemed to favor the Celler Bill, H.R. 942, calling for a single responsible officer appointed by the President.

One witness, Frank B. Jewett, advised against any Foundation. He said that the present shortage of private funds for fundamental research in the sciences was only temporary, due to the existing tax structure, and that he thought that a small change in the tax laws would make private funds again available in sufficient amounts. In taking a position against the Foundation he continued his stand of a year ago in the Senate hearings as the only person to testify against some form of Federal subsidy for research.

When asked by the Committee specifically about this solution, President Conant replied that he thought it was "indirect" and that immediate measures should be taken to discover scientific talent among young people and to provide for their basic science education through scholarships.

President Conant also said that he thought there had been entirely too much concern over the proposed organization and administration of the bills, that he personally would be satisfied to see any of them made a law. He held that the patent issue was separate and should not be a part of final congressional action. He also preferred the wider latitude permitted in the four identical bills, where the social sciences are not specifically mentioned but the Board is permitted to increase the number of Divisions to include "other sciences."

The questions of the Committee were designed to get clear statements on the controversial points: type of administration, single administrator or board; patent provisions; and inclusion of the social sciences. To a lesser extent questions were directed to finding out whether witnesses favored some mandatory geographical distribution of funds.

The complete testimony from the official record will not be available for some time, so that an analysis of each witness's stand on these controversial points cannot now be made. In some cases no clear-cut classification will be available even then, because some witnesses avoided a direct answer to the question.

Others among those who testified were Edmund E. Day, representing the newly-formed Inter-Society Committee for a National Science Foundation (Science, March 7); Robert Patterson, Secretary of War; Adm. P. F. Lee, director, Office of Naval Research; Thomas Parran, Surgeon General; Caroll L. Wilson, representing the Atomic Energy Commission; William C. Foster, Undersecretary of Commerce; Detlev Bronk, National Research Council; Randolph T. Major, director of research and development, Merck & Company, Inc.; Robert M. Yerkes, Social Science Research Council; Bruce Brown, Standard Oil of Indiana; John F. Victory, National Advisory Committee for Aeronautics; W. A. Higinbotham, Federation of American Scientists; Vannevar Bush, Joint Army-Navy Research Board; and George E. Folk, National Association of Manufacturers.

Statements from Representatives Celler and Mills, Isaiah Bowman, and Homer Smith were inserted in the record without reading.

Following an all-day meeting of the Executive Committee of the new Inter-Society Committee for a National Science Foundation, March 5, Dael Wolfle, secretary-treasurer, announced that Isaiah Bowman and W. Albert Noyes, Jr. had found it impossible to serve as members of the Committee. The remaining members, Edmund E. Day, Harlow Shapley, Ralph W. Gerard, and R. G. Gustavson, unanimously agreed on the following statement, which became part of Dr. Day's testimony at the House hearing, March 6:

(1) The Foundation must provide for the support of basic fundamental research without reference to the development of immediate practical applications.

The many striking applications of technology during the war tend to give a misleading impression of the progress of science. Wartime "discoveries," such as radar, magnetic detection of submarines, and even the atomic bomb, were simply the exploitation of long-established scientific principles. Radar, for example, is a straightforward modification of radio. And radio is the practical use of the discoveries made by Hertz in the middle of the last century. During the war virtually all basic research came to a halt as scientists and laboratories concentrated on engineering and development for immediate uses. We must have a National Science Foundation to replenish our stockpile of basic scientific knowledge.

(2) The Foundation should be free to investigate problems in any scientific area and by any appropriate method, for it is impossible to determine in advance which problems will lead to fruitful results and which methods will be successful.

Twenty years ago who would have thought that the study of molds would lead to the development of the wonder drug, penicillin? Fifty years ago, in searching for the missing element, radium, Madam Curie had no thought or foreknowledge of its many useful applications.

(3) The Foundation should provide for the training of young scientists to make up the great shortage of scientific personnel that now exists due largely to the fact that students who would normally have begun their scientific careers were taken for military duty.

(4) The Foundation should provide for the coordination of scientific research and the development and utilization of scientific personnel. It should integrate its work with that of other government agencies, should be free to plan the development of new laboratories when necessary, and should become responsible for the continuation of the National Roster of Scientific and Specialized Personnel. The Foundation should feel a responsibility and have authority to survey continuously the country's scientific needs and assume leadership in planning ways to meet those needs.

The administrative machinery necessary to accomplish these aims was one of the controversial points in the bills considered last year. There is no unanimity of opinion among scientists as to the most desirable administrative setup. The specific organization should be planned with the help of experts in government and

administration. There is a very widespread feeling among scientists that the caliber of men chosen to direct the National Science Foundation is much more important than the details of administrative organization. It is our feeling that the bill should not be so specific in details of procedure and organization as to hamper the administration in carrying out the objectives of the Foundation. Competent administrators, well acquainted with scientific problems and with the full confidence of the Government and their scientific colleagues, can create an effective National Science Foundation.

President Conant's testimony, which will be printed in full in *Science* next week, centered about the following points:

(1) The welfare of a free society in an industrial age depends on a continuous advance of science and the application of the new knowledge to useful ends.

(2) Both the advance of science and the application of science to industry, to medicine, and to agriculture depend on the quality and quantity of scientists and engineers available in a nation.

(3) The supply of men depends on the number trained and the innate ability of those who undertake the special training.

(4) The scientific professions in question require a long and expensive education beyond high school.

(5) This education is of such a nature that it can be given at only a relatively few centers in every state.

(6) Therefore, unless a student lives in one of these centers, his professional training must be costly, for he must pay for room and board away from home as well as other expenses.

(7) The consequent financial barrier now prevents many boys and girls of high ability from going on with an advanced education. Much talent is lost to the Nation by this educational waste.

(8) To right the balance, a Federally-supported scholarship and fellowship program is required.

President Truman paid a surprise visit to the project exhibits of the 40 contestants in the 6th Science Talent Search, Saturday, March 1. The President appeared at the Statler Hotel at the dinner hour. Refusing to interrupt the dinner, he spent a half-hour in the company of his aides viewing the exhibits. The President specifically requested officials to provide him with a detailed report on the present whereabouts and status of the winners of the previous five Searches conducted annually under the auspices of Science Service for the Westinghouse Science Scholarships.

About People

Walter M. Gilbert retired on March 1 as executive officer of the Carnegie Institution of Washington after 42 years of service. Since 1905, three years after establishment of the Institution, he has been a central figure in the operational and administrative conduct of its affairs. During the war years he served as representative of the Institution in its contractural relationships with government agencies.

The new executive officer is Paul A. Scherer, formerly chief of the engineering and transition office, OSRD.

Henry W. Smyth, professor of physics, Princeton University, is presenting a summary of progress in atomic physics during the past half-century, in connection with the Sigma Xi National Lectureships, during March. Following are the universities at which he will speak and the dates: Baylor University, March 25; Tulane University, March 26; and The University of North Carolina, March 28. On March 3, 5, 6, and 7 Dr. Smyth spoke at the University of Nevada, Brigham Young University, University of Utah, and Utah State Agricultural College, respectively.

William E. Rand, Sun Chemical Corporation, New York, has been appointed assistant director of the Stanford Research Institute, Stanford University, California. He will also act as project manager for the Natural Rubber Research Project being conducted by the Institute for the Office of Naval Research.

Mary Evans Maxfield, assistant professor of physiology, Mt. Holyoke College, has been appointed to the staff of the Department of Pharmacology and Therapeutics, Wayne University College of Medicine, Detroit, Michigan.

Barry Commoner, medical and biological editor of *Science Illustrated* since May 1946, has resigned from the editorial staff.

Norman Q. Brill has been appointed professor and director of the Department of Neurology, Georgetown University School of Medicine, Washington, D. C. Dr. Brill, who taught at Columbia University and engaged in private practice in New York before the war, is at present consultant and assistant chief of neuropsychiatry, Veterans Administration, Washington, D. C.

William Roger Sloat, television engineer, Columbia Broadcasting System, New York, has been appointed instructor in engineering, Institute of Geophysical Technology of St. Louis University.

W. E. Carroll, head of the University of Illinois Department of Animal Husbandry since 1939 and member of the Agricultural College staff since 1925, has been appointed associate director of the Agricultural Experiment Station. He will be responsible for coordination and routine administration of several hundred research projects under way at the Station.

Clarence A. Discher, formerly acting head of the Chemistry Department, Oshkosh, Wisconsin, State Teachers College, has been appointed assistant professor of chemistry, Rutgers College of Pharmacy.

H. H. Remmers, director, Division of Educational Reference, Purdue University, Lafayette, Indiana, has accepted an invitation to lecture on educational measurement and evaluation in the summer session of the University of British Columbia, Vancouver, July 2–August 15.

R. B. Cattell, chief surgeon of the Lahey Clinic, Boston, and W. E. Gallie, professor of surgery, University of Toronto, recently addressed members of the University of Texas Medical Branch, Galveston, Texas.

Virginia C. Dewey, formerly of the chemical research staff of Lever Brothers, Cambridge, Massachusetts, is now research associate in microbiology at Amherst College, Amherst, Massachusetts.

James O. Foley has been made professor of anatomy and chairman of the department, Medical College of Alabama, Birmingham, Alabama. Dr. Foley went to Alabama from Tulane University, where

he had been from 1925 through 1930. He replaces C. N. Goss, who recently went to Louisiana State University School of Medicine as chairman of the Department of Anatomy.

Clarence J. Hylander, former staff officer with the Naval Air Training Command and head, Botany Department, Colgate University, has joined the Macmillan Company as visual aids editor in their College Department.

Alfred S. Romer has been appointed Alexander Agassiz professor of zoology at Harvard University. Director of the Museum of Comparative Zoology, curator of Vertebrate Paleontology, and professor of zoology, Prof. Romer joins Henry B. Bigelow, curator of Oceanography, and Frank M. Carpenter, curator of Fossil Insects, who also held Agassiz professorships, established in 1944 under the will of Alexander Agassiz, who was in charge of the Museum of Comparative Zoology until his death in 1910.

James Bordley, III, associate professor of medicine, Johns Hopkins University School of Medicine, has been appointed director of the Mary Imogene Bassett Hospital, Cooperstown, New York, to succeed George M. Mackenzie. Dr. Mackenzie, for 20 years physician-in-chief and director of the hospital, will retire September 1, 1947.

Francis E. Johnstone, Jr., professor of horticulture and vegetable breeder, Alabama Polytechnic Institute, Auburn, has been appointed geneticist for the Educational Service of the National Cottonseed Products Association. Dr. Johnstone, who has been associated with the Institute since 1940 except for wartime service in the Navy, will cooperate with research institutions in encouraging production of cotton high in oil content and other oilseed crops in cotton states.

Hobart M. Smith, Department of Fish and Game, Texas A. and M. College, College Station, has been appointed assistant professor of zoology at the University of Illinois, Urbana.

Ralph L. Shriner will become professor and head of the division of organic chemistry, Department of Chemistry, State University of Iowa, Iowa City, in September 1947. He is now chairman of the Department of Chemistry, University of Indiana, Bloomington, a post he has held since 1941.

Grants and Awards

The Federated Societies for Experimental Biology will grant five travel awards of $500 each to younger scientists in the physiological field who wish to present papers before the 17th International Physiological Congress at Oxford, England, July 22–25. Awards will be made to scientists 35 years of age or younger, who submit outstanding contributions in physiology for presentation.

Membership in one of the Federated Societies will not influence selection for an award. Until March 22 applicants may address letters to Maurice B. Visscher, Secretary, American Physiological Society, 318 Millard Hall, University of Minnesota, Minneapolis 14, enclosing seven copies of an abstract of his or her paper and an equal number of copies of a curriculum vitae and bibliography. Applicants should also send the names of two to four scientists competent to evaluate their work.

The Agricultural and Mechanical College of Texas, College Station, Texas, has received the following research grants: $6,000 for two research fellowships from the Heil Company, Milwaukee, Wisconsin, and gift of a portable dehydration unit for hay and grain drying and a mechanical harvester; $15,000 from Swift & Company to the Texas Agricultural Experiment Station for support of a three- to five-year study supplementing investigations initiated by the Station and the U. S. Department of Agriculture on methods of applying phosphorus to cattle by application of fertilizers and by feeding; $5,000 from John W. Carpenter, Dallas, Texas, for work on artificial insemination of dairy cattle; and $250 from the Texas Restaurant Foundation to assist students in commercial dietetics at Prairie View University for Negroes, a branch of Texas A. & M.

C. Clayton Hoff, assistant professor of zoology and parasitology, Colorado A. & M. College, has been awarded a grant of $200 by the American Academy of Arts and Sciences for ecological work on plant and animal associations at various altitude levels in Colorado.

The Roscoe B. Jackson Memorial Laboratory has received a grant of $15,000 from the John and Mary R. Markle Foundation to be used over a two-year period for developing electronic devices for measurement of emotional and physiological reactions. The work will be in charge of John L. Fuller.

Fellowships

Battelle Memorial Institute, Columbus, Ohio, has announced openings for a limited number of predoctoral Fellows and postdoctoral Associates to conduct scientific and engineering investigations in Battelle laboratories during the year beginning in the summer or fall of 1947. Appointees will devote full time to their own research projects in Battelle laboratories under the guidance of the Battelle technical staff.

Fellowships are open to men seeking the Doctor's degree in a science or engineering and are available normally for the final year of graduate study. Fellows receive a stipend of $1,200 a year plus allowances for supplies, equipment, traveling, and other expenses.

Associateships are open to young men who have completed their academic training and have shown exceptional aptitude for research as graduate students or in subsequent employment. The stipend of an Associate is adjusted to his preparation, experience, and promise.

Inquiries may be addressed to the Institute, 505 King Avenue, Columbus 1, Ohio.

General Electric Company recently granted research fellowships totaling $20,500 to 14 graduate students for advanced study in electricity, physics, physical chemistry, and engineering.

The American Telephone and Telegraph Company has awarded 1947–48 Frank B. Jewett fellowships for research in the physical sciences to the following: M. G. Ettlinger, California Institute of Technology, also a 1946–47 fellow, in chemistry; Wallace D. Hayes, California Institute of Technology, physics; Paul Olum, Harvard University, mathematics; Aadne Ore, Yale University, physics; Alfred Schild, Carnegie Institute of Technology, physics; Robert L. Scott, University of California, also a 1946–47 fellow, chemistry; and Edwin H. Spanier, University of Michigan, mathematics.

The fellowships, founded three years ago on retirement of Dr. Jewett, vice-president in charge of development and research, carry an annual stipend of $3,000 to the holder and $1,500 to the resident institution, and are normally available only to scientists who have recently received doctorates or are about to receive them.

The University of Maryland has been granted a fund by the Bartlett Tree Research Laboratories, Stamford, Connecticut for study of nematode diseases of ornamental plants. The grant will provide a graduate assistantship in the Department of Botany beginning July 1.

Colleges and Universities

The University of Rochester Division of Engineering, Rochester, New York, announces the following new administrative appointments: John H. Belknap, chairman of the Department of Electrical Engineering; Howard G. Gardner, chairman, Department of Chemical Engineering; and Horace W. Leet, chairman, Department of Mechanical Engineering. The Division of Engineering, created in 1945 as an expansion of the former Department of Engineering, has an enrollment of 400 students, nearly double the prewar number.

A new $500,000 Navy research contract for the development of a synchrotron was announced by Edmund E. Day, president of Cornell University, March 5. The new instrument is to be housed in a small structure north of Bailey Hall, adjoining the proposed new building for the Laboratory of Nuclear Studies. The new synchrotron will be approximately 12 feet in diameter and contain nearly 70 tons of special transformer iron. It is expected to accelerate electrons to 300,000,000 electron volts, sufficient to produce mesons.

Meanwhile, new methods of studying high-energy particles are being developed at the Cornell Laboratory as completion of the synchrotron is awaited. It is hoped that some of these may be tested in cosmic-ray study before the machine is ready for use.

The production and study of mesons is only one of the experiments planned for the synchrotron. Experimental verification of some of the present theories making conflicting predictions about the behavior of electric forces in the ultra-high energy region will be possible.

Researchers at present are making use of the slow neutron velocity-measuring equipment, again in operation with the Cornell cyclotron after being loaned to the Los Alamos Laboratory. New results have been obtained recently on the scattering of slow neutrons in water.

A new staff of physicists has been assembled at the University's Laboratory of Nuclear Studies. In addition to Director Robert R. Wilson (*Science*, February 21), others include Hans A. Bethe, recently head of the Theoretical Physics Division, Los Alamos; Lloyd P. Smith, now chairman of Cornell's Departments of Physics and Engineering Physics, and associate director of the RCA Laboratories, Princeton, during the war; L. G. Parratt, formerly head of the Engineering Division Research Unit, Naval Ordnance Laboratory; K. I. Greisen, of the Los Alamos staff; B. D. McDaniel, of the Radiation Laboratory, M.I.T.; Richard P. Feynman, formerly of Princeton, and a group leader in the Theoretical Physics Division, Los Alamos; Philip Morrison, senior physicist at the Metallurgical Laboratory, Chicago, and at Los Alamos; and Dale R. Corson, of the Radiation Laboratory and the Los Alamos staff. New research associates are Charles P. Baker, Ernest D. Courant, John W. DeWire, and Charles D. Swartz, all of whom had important wartime assignments.

Franklin A. Long, of the Cornell Department of Chemistry, who has returned after three and one-half years with OSRD, will also be a member of the group. Other additions to the staff are expected. Robert F. Bacher, former head of the Laboratory of Nuclear Studies, is presently serving on the U. S. Atomic Energy Commission (*Science*, November 8, December 13 and 20).

Industrial Laboratories

Eli Lilly and Company, Indianapolis, Indiana, has appointed the following to the Research and Control Function: Royce Buck, University of Minnesota, Analytical Department; Ralph Truax, Purdue University, Antibiotics Manufacturing Division; and Mary Jane Ward, Iowa State College, Organic Chemistry Division.

Bausch & Lomb Optical Company announces opening of a manufacturing plant at Wellsville, New York, and purchase of the four-story Navy Building on Champeney Terrace, Rochester, New York, as part of its $6,000,000 modernization program. At present 400 employees are producing eye-glass lenses and television optics in the Navy Building, which was leased to Bausch & Lomb during the war.

E. I. du Pont de Nemours & Company, Wilmington, Delaware, has announced the following organizational changes in the Technical Division of the Rayon Department: Hood Worthington, assistant director, Engineering Research Section, Wilmington, was made assistant director, Nylon Research Section, Wilmington, and W. L. Hyden, assistant director, Cellophane Research Section, Buffalo, New York, was promoted to director of personnel, planning, development, and patent service, Wilmington.

Other appointments are: F. H. Swezey, senior research associate, acetate process rayon plant, Waynesboro, Virginia; G. P. Hoff, director of acetate research, and G. M. Karns, director of cellophane research, Wilmington; W. W. Heckert, director, and E. W. Spanagel, assistant director of cellophane research, Buffalo; W. C. Eberlin, assistant director of new fibers research, Waynesboro; C. E. Miller, manager of cellulose acetate research, Waynesboro; R. A. A. Hentschel, manager of pioneering research, Buffalo; F. R. Millhiser, manager of viscose rayon research, Richmond, Virginia; and R. F. Conaway, assistant director of the Acetate Research Section, Waynesboro.

Meetings

The Southeastern Section of the Botanical Society of America, Inc., will hold its 4th annual meeting at Emory University, Georgia, April 18–19, with the Association of Southeastern Biologists and the Southern Appalachian Botanical Club.

The Federation of American Societies for Experimental Biology will meet in Chicago beginning May 18, William H. Chambers, Federation secretary-treasurer, has announced. The Federation is composed of the American Physiological Society, American Society of Biological Chemists, American Society for Pharmacology and Experimental Therapeutics, American Society for Experimental Path-

ology, American Institute of Nutrition, and American Association of Immunologsist.

The Pittsburgh Geological Society will hold a symposium on the Trenton and Sub-Trenton strata of the Appalachian Area May 16 at the William Penn Hotel, Pittsburgh. Papers will be presented at morning and afternoon sessions, and a banquet will be held in the evening.

The purpose of the symposium is to bring together all information possible on the Trenton and Sub-Trenton rocks of the Appalachian Basin from the surface section on the eastern and northwestern outcrop belt to the subsurface section across the Basin as interpreted by well records and sample studies. The stratigraphy, structure, and economic aspects of this portion of the geological column will be correlated for the entire Appalachian Basin.

John T. Galey is chairman of the symposium committee.

Elections

The Oregon Academy of Science elected the following officers at its 5th annual meeting in Portland, Oregon, January 17–18: R. R. Huestis, Eugene, president; Warren D. Smith, Eugene, vice-president; F. A. Gilfillan, Corvallis, secretary; and Pierre Van Rysselberghe, Eugene, treasurer.

The southern section of the American Society of Plant Physiologists elected the following officers for 1947: O. A. Leonard, Mississippi State College, chairman; Ivan E. Miles, North Carolina Department of Agriculture, vice-chairman; and Henry C. Harris, Florida Agricultural Experiment Station, secretary-treasurer. H. P. Cooper, Clemson College, South Carolina, E. M. Emmert, University of Kentucky, and S. F. Thornton, Norfolk, Virginia, were elected members of the executive committee.

A new insecticide, TEP, which will kill some important insect pests not affected by DDT, has been announced by Leo R. Tehon, acting chief, Illinois Natural History Survey.

Disclosure was made by George F. Ludvik, working in the Natural History Survey laboratories on a Monsanto Chemical Company fellowship under George C. Decker, entomologist of the Natural History Survey and the Illinois Agricultural Experiment Station.

The new insecticide, tetraethyl pyrophosphate, which for brevity can be shortened to TEP, has been unusually effective in laboratory tests against aphids and mites, destructive crop pests difficult or impossible to control by DDT. The shortage of nicotine, the poison usually relied upon for control of aphids on peas, apples, potatoes, peaches, and other crops, makes discovery of TEP especially important at this time, Dr. Decker pointed out. Laboratory tests indicate that it is more than 10 times as toxic to aphids as nicotine alkaloid.

TEP was discovered in studying an extensive series of phosphorus compounds. It has been found to be approximately three times as toxic to insects as hexaethyl tetraphosphate, an insecticide developed by the Germans during the war as a substitute for nicotine.

An advantage of TEP, Dr. Decker explained, is that it does not appear to leave a poisonous residue. Tests being conducted indicate that this product will decompose within a few days after application, and food products on which it is used may not need to be washed before marketing.

Before being employed on the Monsanto research project, Mr. Ludvik served 40 months in the Army Medical Corps. He was graduated and received his Master's degree from the University of Illinois and is continuing graduate study and research on insect pests of crops.

A letter from Oscar Orias, Córdoba, Argentina, indicates that a private institution for research in the fundamental branches of medicine, Instituto de Investigación Médica para Promoción de la Medicina Científica, has been organized with private funds in Córdoba. Dr. Orias, director of the Institute, was at one time traveling fellow of the Rockefeller Foundation, working at Western Reserve and Harvard Universities. On the staff are Enrique Moisset de Espanes, who was at Harvard University in the same capacity, and Inés L. C. de Allende, who visited the University of Rochester.

Dr. Orias writes: "We all had to resign our positions in the Institute of Physiology in the Medical School of the University of Córdoba on account of the situation created in the Argentine Universities by the Perón regime."

The new Institute, he said, will be devoted to research in endocrinology, pharmacology, and physiology of the circulation of the blood. The address is 25 de Mayo 1122, Córdoba.

Recent Deaths

Horace A. Shonle, 54, director of the organic chemical research division of Eli Lilly & Company, Indianapolis, and authority on barbituric compounds, died February 24 following a brief illness. Mr. Shonle discovered amytal in 1924 and was later responsible for the discovery of seconal.

A. R. Mann, 66, agricultural economist and former provost of Cornell University, died on February 21 in New York City upon his return from a special assignment in Europe for the War Department.

Lily Bell Sefton Deatrick, 63, professor of chemistry, West Virginia University, Morgantown, died November 25 in Morgantown. She is survived by her husband, Eugene P. Deatrick, also of the Department of Chemistry, West Virginia University.

Make Plans for. . .

Crystallographic Society, 2nd annual meeting, March 19–21, U. S. Naval Academy, Annapolis, Maryland.

Western Metal Congress and Exposition, fifth, March 22–27, Civic Auditoriums, Oakland, California.

American Association of Petroleum Geologists, 32nd annual meeting, March 24–27, Los Angeles, California.

Midwest Power Conference, March 31–April 2, Palmer House, Chicago.

American Association of Anatomists, annual meeting, April 3–5, Mount Royal Hotel, Montreal, Canada.

Institute of Mathematical Statistics, meeting on stochastic processes and noise, April 24–25, New York City.