Development," on the grounds that it took a "quantitative" approach and failed to recognize the effect that federal R & D has on the quality of American life. He also objected to the committee's proposal for a Joint Congressional Committee on Research Policy. The space committee, he said, was given jurisdiction in this area, and is exercising it through its subcommittee on Science, Research, and Development, chaired by Representative Emilio Q. Daddario (D–Conn.). Miller also expressed doubt about the need for the Government Operations Committee to set up a new subcommittee, in line with Elliott's recommendations.

In regard to the *Science* article on the Elliott Committee, Miller denied its contention that his reservations had been aroused by Elliot's criticism of the space program. "I am well aware," Miller said, "that some people think our space program is siphoning off research talent and money. This is a possibility. We on the Science Committee are not unconcerned about the matter. On the other hand, we do not want to see the space program hurt on the basis of unsupported charges. To date this is all we have. And the tentative probing of the select committee in this area has produced little, if anything, of substance."—D.S.G.

Announcements

A new information center at Oak Ridge National Laboratory has been established to compile and evaluate data on **atomic and molecular physics**. It will be part of the National Standard Reference Data Program. Initially the center's activities will cover the interaction of heavy particles; particle penetration through matter; and excitation, dissociation, ionization, and detachment by external electric and magnetic fields. The new facility will be known as the Atomic and Molecular Processes Information Center, and will be directed by C. F. Barnett of ORNL's thermonuclear division. It is scheduled to be fully operational by 1 July, and inquiries may be addressed to Dr. Barnett then.

The Lowell Technological Institute Research Foundation recently established a **chemistry division**. Work to be undertaken at the laboratory will include research in textiles, leather, paper, organic, inorganic, physical, and polymer chemistry. Allen S. Powell, formerly chief project engineer at the Wright Aeronautical Division, Curtiss Wright Corporation, has been appointed technical director.

Grants, Fellowships, and Awards

Duke University's forestry school has announced the availability of scholarships, fellowships, and assistantships in **forestry** for the 1965–66 academic year. Students in masters and doctoral programs are eligible. The fellowships carry grants of up to $2500, scholarships up to $2000, and assistantships are up to $3500 including summer employment. Work is available in ecology, physiology, soils, biometry, economics, pathology, entomology, and meteorology of forests. (Dean, School of Forestry, Duke University, Durham, North Carolina)

Opportunities for research training at the National Institutes of Health are available to young **physicians and dentists**, starting in July 1967. Approximately 120 appointments will be available, including 60 clinical associates, 40 research associates, and 20 staff associates. Medical school seniors who will enter internship in July 1965 will be considered, along with persons with more advanced training. Deadline for receipt of applications: *14 May*. (Clinical and Professional Education Branch, National Institutes of Health, Bethesda, Md. 20014)

The Hospital for Special Surgery, affiliated with the New York Hospital–Cornell University Medical College, has announced the availability of four fellowships for research training in **orthopedics**, for the fall academic term. The program is sponsored by the U.S. Public Health Service, and is designed to stress an interdisciplinary approach to orthopedics, including clinical epidemiology, genetics, and biometry. It includes programs in ultrastructure of hard tissues and nuclear medicine. The program for each recipient will be arranged according to his needs and preferences. Candidates who have completed residency training in orthopedics are preferred. Stipends will vary according to individual competence. Deadline for receipt of applications: *1 May*. (G. C. H. Bauer, Hospital for Special Surgery, 535 E. 70 St., New York 10021)

Applications are being accepted by the Devereux Foundation, Devon, Pa., for predoctoral internships and postdoctoral fellowships in **child psychology**. The 12-month program will vary according to the recipients' level of training and experience. Participants may work with several types of emotionally disturbed or mentally retarded children at various stages of treatment or rehabilitation. Candidates must be U.S. citizens. For the predoctoral internships, preference will be given advanced graduate students in clinical psychology programs approved by the American Psychological Association. Postdoctoral applicants must have had experience, including a prior internship in clinical psychology. Stipends vary from $2400 to $6000. Housing allowances will be provided, and training schedules can be arranged to allow recipients to maintain university contact. (H. Platt, Institute for Research and Training, Devereux Foundation, Devon, Pa. 19333)

Meeting Notes

The 46th annual meeting of the Federation of American Societies for Experimental Biology will be held 9–14 April, in Atlantic City, N.J. Additional information is available from Mrs. H. B. Lemp, 9650 Wisconsin Ave., Washington, D.C. 20014. The following member societies will meet:

American Physiological Society

American Society of Biological Chemists

American Society for Pharmacology and Experimental Therapeutics

American Society for Experimental Pathology

American Institute of Nutrition

American Association of Immunologists

Papers are invited for presentation during the fourth annual conference on **research in medical education**, 31 October in Philadelphia. The topics to be covered will include faculty and student attitudes, teaching, and learning; prediction or measurement of academic performance; and reports of educational experimentation. Abstracts of up to 350 words are required in duplicate. Deadline: *1 June*. (P. J. Sanazaro, Division of Education, Association of American Medical Colleges, 2530 Ridge Ave., Evanston, Ill. 60201)

A program in **experimental solid state physics** will be offered at M.I.T. 2 August to 3 September, for faculty members and representatives from industry. Participants will have laboratory work, background lectures, and tours of several solid state experimental facilities at M.I.T. Applications for attendance at the program will be considered in the order in which they are received. (Solid State Physics Program, Room 24-410, Center for Advanced Engineering Study, Massachusetts Institute of Technology, Cambridge, Mass. 02139)

The call for papers has been issued for the 1965 national **electronics** conference, scheduled 25–27 October in Chicago. Original and recent papers are invited on all scientific and engineering aspects of modern electrical engineering and electronics. Fifteen copies of a 75-word abstract and of a 700-word summary are required. Deadline: *1 May*. (R. G. Brown, Electrical Engineering Department, Iowa State University, Ames)

Courses

A course on **mammalian chromosome cytology** will be held at Rhode Island Hospital, 11–31 August. Lectures and laboratory sessions will be held on basic cytogenetics and practical methodology, both for human and animal chromosomes. The evening lectures will be on specialized topics. A $50 registration fee will be charged. Applicants must have graduate degrees. Deadline for receipt of applications: *15 April*. (P. S. Moorhead, Wistar Institute, 36th and Spruce St., Philadelphia, Pa. 19104)

Georgia Institute of Technology plans a course on **mechanical vibrations** 21–25 June in Atlanta. It will aim to familiarize participants with the basic equations of motion and their solutions, and applications in the area of mechanical vibrations. Applicants should have a degree in physics or engineering, and have completed at least a year of calculus. The course will include about 35 hours of class plus evening work. A fee of $150 includes texts and supplies. Deadline for receipt of applications: *7 June*. (Director, Dept. of Continuing Education, Georgia Institute of Technology, Atlanta 30332)

Scientists in the News

Carl R. Brewer, formerly chief of the research grants branch, National Institute of General Medical Sciences, has joined the University of Texas graduate school of biochemical sciences, Houston, as professor of microbiology and associate dean. He also is deputy director of the school's Institute of Biomedical Sciences.

Three deputy directors and an executive secretary were recently appointed to the Scientific Secretariat of the Canadian Government. The deputy directors are **Louis Paul Dugal**, dean of the faculty of pure and applied science, University of Ottawa, and **John Robert Weir**, dean of the faculty of agriculture and home economics at the University of Manitoba, both of whom will begin their new duties 1 July; and **J. Rennie Whitehead**, director of research for RCA Victor, Ltd., who will start 1 June. **Elwyn Owen Hughes**, scientific attaché at the Canadian Embassy in Washington, will become executive secretary 1 May.

The Scientific Secretariat, formed last July as part of the Privy Council Office, is directed by **F. A. Forward**, former head of the University of British Columbia's metallurgy department and president-elect of the Canadian Institute of Mining and Metallurgy.

The new president of the American Council of Independent Laboratories is **Charles C. Wright**, president of Oilwell Research, Inc., Long Beach, California.

Charles C. Bates, formerly in the Defense Department's Advanced Research Projects Agency, has become scientific and technical director at the United States Naval Oceanographic Office.

Frederic W. Nordsiek, of the Sloan-Kettering Institute for Cancer Research, has been named vice president at the institute. He is in charge of grants and contracts.

Robert Higgins Ebert will succeed **George Packer Berry** as dean of the Harvard Medical School, 1 July. Ebert is a professor of clinical medicine at Harvard and chief of medical services at Massachusetts General Hospital. Berry has announced plans to retire this summer.

Theodore P. Wright, retired vice president for research at Cornell University, has been elected president of Associated Universities, Inc., the organization which administers Brookhaven National Laboratory and the National Radio Astronomy Observatory.

The gold medal of the Royal Astronomical Society of London has been awarded to **Gerald Maurice Clemence**, senior research associate and lecturer at Yale University. The prize was in recognition of his "application of celestial mechanics to the motions in the solar system" and his "fundamental contributions to the study of time and the system of astronomical constants."

Francis J. Braceland, psychiatrist-in-chief of the Institute of Living, Hartford, Conn., has been appointed editor of the *American Journal of Psychiatry*. He will succeed **C. B. Farrar**, who, at 90, will become editor emeritus.

The new director of the National Bureau of Standards' Fritz Peak Observatory, Colorado, is **Franklin E. Roach**, formerly chief of the airglow and aurora section, Central Radio Propagation Laboratory.

The University of Cincinnati has named **Edward P. Radford, Jr.**, director of the Kettering Laboratory. He is an associate professor of physiology at the Harvard University school of public health.

Isaac D. Welt, research professor of chemistry at American University, Washington, has been appointed deputy director of the center for technology and administration for scientific and technical information at the school.

A. Geoffrey Norman, vice president for research at the University of Michigan, has been appointed chairman of the division of biology and agriculture of the National Research Council.

Frank E. Myers, associate director for education of Argonne National Laboratory, has been named editor of *Journal of Applied Physics*, and of *Applied Physics Letters*.

John Lott Brown, formerly director of the graduate training program in physiology at the University of Pennsylvania, has been named dean of the graduate school at Kansas State Uni-

versity, Manhattan, Kansas. He succeeds **Harold Howe**, who resigned to become dean of the graduate school at St. Louis University.

Robert B. Young has returned to Aerojet General Corporation after a year's leave of absence, during which he served as director of industrial operations at NASA's George C. Marshall Space Flight Center, Huntsville, Alabama. He is vice president and general manager of Aerojet General's Sacramento plant.

Recent Deaths

Walter H. Bucher, 76; professor emeritus of geology at Columbia University; 17 February.

David Powell Hackett, 39; professor of biochemistry at the University of California, Berkeley; 21 January.

Virgil M. Hancher, 68; retired president of the University of Iowa; 30 January.

Svend Oluf Heiberg, 64; associate dean of the State University College of Forestry, Syracuse University; 5 February.

Victor Hess, 81; professor emeritus of physics, Fordham University; 17 December.

Helen Lasby Jeffrey, 54; biochemist at the National Institutes of Health; 10 January.

Jaroslav Kříženecký, director of the Mendel Memorial Museum, Czechoslovakia; 21 December.

Herbert Leaderman, 51; retired physicist at the National Bureau of Standards; 20 February.

Hanns G. Maister, 69; chemical engineer, U.S. Northern Regional Research Laboratory, Peoria, Ill.; 15 February.

Ferdinando A. Morin, professor of anatomy and chairman of the department, Wayne State University; 26 November.

Elizabeth Trevett Peabody, 59; retired regional medical director at the Children's Bureau, Atlanta, Ga.; 18 February.

Ernest R. Purvis, 58; professor of soils, Rutgers University; 30 December.

James A. G. Rehn, 83; chairman of the entomology department, Academy of Natural Sciences of Philadelphia; 25 January.

I. Melville Stein, 70; former president, Leeds and Northrop Company; 24 January.

Oskar von Engeln, 84; professor emeritus of geology at Cornell University; 25 January.

Erratum: In the review of the book *Nuclear Power, U.S.A.* (12 Feb., p. 721), the third author's name was incorrectly given as John F. Haggerty. The author is John F. Hogerton.

REPORT FROM EUROPE

West German Research Spending: Plans for 1966 to 1968

London. West German Chancellor Ludwig Erhard and Science Minister Hans Lenz apparently meant business late in 1964 when they asserted that central-government support for higher education and research must double by 1970. Recently, the ministry of science issued a report which detailed plans to increase this support in the next 3 years by an average of 75 percent over the level planned for 1965.

Thus, in the Federal Republic of Germany, spending for science, engineering, and higher education would rise from about $556 million this year to an average of about $892 million yearly in 1966–68. One of the report's many tables indicates, furthermore, that the ministry of finance has planned for most of the increases to take place in 1966 alone.

General support for research and education would more than double, increasing from $124 million to $285 million a year. The general support funds pay the central government's contributions to university building costs, the grant-making German Research Association (DFG), and the more than 40 research institutes of the Max Planck Society.

The outlay for Germany's modest space program would also more than double, from $35 million to $98 million a year. Much of the increase would go to build up the domestic space effort, which in 1964 and 1965 is receiving sums smaller than Germany's contribution to the European research and rocket-development programs.

Although expanding less notably, defense and atomic-energy research and development would each take close to a fifth of the total: about $210 million yearly for defense and $170 million for atomic energy. Only about 10 percent of the defense research and development spending is classed as research; these funds support nonclassified studies in universities, research at the joint German–French defense institute at St. Louis in France, and collaboration with industry and research in several institutes of the Fraunhofer Society. Of the atomc-energy budget, close to a third has been earmarked in recent years for such international undertakings as the high-energy research center at Geneva (CERN), the chemical-processing company (Eurochemic) at Mol, Belgium, and the European Atomic Energy Community (Euratom), which, of course, finances a considerable number of projects in Germany. Other major German nuclear-energy projects are the electron synchrotron in Hamburg, the fusion research center outside Munich, the construction of the atomic-powered merchant ship *Otto Hahn*, and the Karlsruhe reactor development center.

Also included in the budget for higher-education and research are support for university students and for research in the laboratories of government ministries. Both these forms of support will expand.

The science ministry's report is the

The author, Victor K. McElheny, is European correspondent for *Science*. He will report frequently on important scientific installations and developments. Mr. McElheny has been a science news reporter for the Charlotte *Observer* and a Nieman fellow at Harvard, and recently was associated with the Swedish-American News Bureau in Stockholm. His address is Flat 3, 18 Kensington Court Place, London, W.8, England. Telephone: Western 5360. Reprints can be obtained from Mr. McElheny at the London address and also from *Science* editorial offices.