

remarks to several Senators, the President has indicated that he feels that "something other than the strict military needs of this country" is having influence on the decisions that determine national defense policy. If this matter, which in the opinion of some commentators has an obvious relationship to the role of retired officers in the defense industry, is made a part of the Hébert investigation, July may be a very noisy month in Washington.

### Senate Votes Space Agency \$485 Million for Fiscal 1960

By a vote of 88 to 1, the Senate has passed an authorization bill (HR 7007) that exactly conforms to President Eisenhower's request for funds for the National Aeronautics and Space Administration. A total of \$485 million is authorized by the bill for the space agency's operations during fiscal year 1960. John E. Stennis (D-Miss.), chairman of the NASA authorization subcommittee, said the amount would probably be the smallest of the yearly space authorization bills to come before Congress in the next 5 to 10 years. The Senate action restored a number of cuts made in the bill by the House of Representatives. Funds amounting to \$4.75 million, which NASA requested for a rocket-fuel research center, had been deleted by the lower chamber on the grounds that NASA officials did not have a definite site in mind for the center. The Senate committee restored the funds after hearing that a decision on the matter would be made within 3 months. In passing the bill, the Senate also added a provision requiring the space agency to notify both the House's Science and Astronautics Committee and the Senate's Aeronautical and Space Science Committee before any research and development project costing \$250,000 or more is begun.

Another lopsided vote—392 to 3—resulted in House approval of the authorization bill for the Defense Department. The bill, which provides approximately \$39 billion for the armed services, will need Senate approval before it becomes effective. The total provided was about \$400 million less than the President requested in his budget and about \$1 billion less than was voted for fiscal 1959. In making its authorization, the House of Representatives followed the recommendations of its Defense Appropriations subcommittee. In its report the committee said it "is not happy over the prospect of being in second place to the U.S.S.R. in the highly significant ICBM field." One of the committee's recommendations was for \$85 million "as a

down payment" for another eight squadrons of Atlas ballistic missiles.

In another appropriation action, the Joint Congressional Committee on Atomic Energy has approved a bill to provide the Atomic Energy Commission with \$180 million for fiscal year 1960. The greater part of this amount—\$165 million—is for plan acquisition and construction. Another provision increases the funds for research on atomic fallout from \$2 million, which the commission requested, to \$3 million. The congressional committee also extended for another 5 years a compulsory patent-licensing provision that prevents a private company from obtaining monopolistic control of the atomic-energy industry by restricting the use of any major discovery its employees might make while doing work contracted for by the AEC.

### Progress in Mental Health Care

The National Association for Mental Health reports that resident patients in state and county mental hospitals stood at 545,000 on 31 December 1958, compared to 548,000 at the end of 1957, a reduction of approximately one-half of 1 percent. Admissions in 1958 were 210,000, compared to 195,000 in 1957—a rise of about 8 percent. The net fall in the resident population of the state and county hospitals in the face of the steep increase in admissions indicates that more patients are getting more treatment. However, the association's annual report warns that it is primarily the new admissions that are being helped and discharged. The great majority of the old patients are getting little or no treatment at all.

When rated according to minimum standards set by the American Psychiatric Association, few mental hospitals are shown to be giving their patients the treatment they need. Of the 228 mental hospitals and institutions inspected by the American Psychiatric Association by the end of 1958, only 34 were approved. Sixty-six had been given only conditional approval and 109 were disapproved. Reports on the remaining 19 had not yet been released at the time the mental health association's annual review was being written.

### Preservation of Educational Standards During Teacher Shortage

A nationwide program of experiments on ways of preventing deterioration of education resulting from the mounting shortage of college teachers by improving the use of available teaching resources has been described in a report issued by the Fund for the Advancement

of Education (477 Madison Ave., New York 22). The study discusses the following innovations: (i) more responsibility to students for their own learning; (ii) regular use of television, films, self-teaching machines, and other technological devices; (iii) teaching students in large groups, which ranged as high as from 100 to 400; (iv) use of graduate and undergraduate teaching assistants or part-time faculty members; (v) streamlining the curriculum to reduce proliferation and duplication of courses.

The experiments reviewed in the report were supported by the Fund in 1956 and 1957 to make better use of college teachers' time, talents, and skills. The report was submitted to the Fund by a group of college and university administrators who form the Committee on Utilization of College Teaching Resources. The committee was established in 1956 to formulate the program of experiments. In the 2 years, the fund has made 62 grants totaling \$994,845 to 48 colleges and universities.

### News Briefs

The Office of Science Information Service of the National Science Foundation has started a series of studies of national scientific and technical communication systems that are intended to serve as an information base for the development of future cooperative programs. Grants have been made to examine national systems as follows: Poland, John L. Mish, through the New York Public Library; Japan, George H. Kerr, through the Pacific Science Board; Indonesia, John O. Sutter, through the Pacific Science Board. The program will be expanded to include other areas of the world. Plans for publication resulting from these studies will be announced later.

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A 6200-volume set of books on entomology has been acquired by the D. H. Hill Library at North Carolina State College. The collection, purchased from Frederick F. Tippmann, an engineer and amateur ornithologist, had a market value of \$60,000 and included many rare volumes. This acquisition, according to college officials, makes the Hill Library the foremost institution in the Southeast in entomological material and places it among the leading institutions in the nation in this field. The Tippmann collection was described as "one of the few remaining great private entomological libraries."

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The presidents and top scientists of 20 Rocky Mountain colleges and universities have joined together to form a new cooperative research corporation, Asso-

ciated Rocky Mountain Universities, Inc. Every public and private institution in the eight mountain states that offers a master's degree in science is a participant in ARMU. The corporation is designed to attract new scientific installations to the Rocky Mountain area by offering the cooperative efforts of its members to the solution of the scientific and management problems involved.

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An agreement between the Department of Defense and the National Aeronautics and Space Administration, making available DOD's Industrial Security Program to NASA, has eliminated the need for the civilian space agency to establish a similar program. The agreement authorizes DOD to act on behalf of the NASA in security matters relating to contractors.

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The International Atomic Energy Agency issued a directory of power reactors now in operation or under construction in various parts of the world. This is the agency's first major scientific publication; directories of other types of reactors are under preparation. In all, 36 power reactor projects have been included in the directory, 15 in the United States, eight in the United Kingdom, four each in France and the U.S.S.R., and one each in Belgium, Canada, Czechoslovakia, Germany (Federal Republic), and Sweden. In some cases a project comprises more than one reactor. The reactors have been grouped in six categories, according to the coolant used.

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A bust of Ales Hrdlicka (1869-1943), world-famous anthropologist who was associated with the Smithsonian Institution for 40 years, was presented recently to the Smithsonian's National Museum by Miloslav Ruzek, ambassador of the Czechoslovak Republic to the United States. The gift was made on behalf of several educational and cultural groups of Czechoslovakia as a memento of the recent observances in that country marking the 15th anniversary of Hrdlicka's death and the 90th anniversary of his birth.

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The federal budget now allocates some \$6.8 billion to research on weapons and less than 4 percent of that amount to all medical research, according to Senator Richard Neuberger in an address to the National Conference on World Health in Washington last month.

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The U.S. Office of Education, Washington 25, D.C., has announced publication of its second annual review and digest of state legislation affecting higher education. The report was prepared by the Division of Higher Education pri-

marily for use in planning future programs and budgets for colleges and universities. The new publication, *Survey of State Legislation Relating to Higher Education*, covers the period 1 July 1957 to 30 June 1958.

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As the final part of its survey of the over-all United States research and development effort during 1953-54, the National Science Foundation has released *Scientific Research and Development in Colleges and Universities—Expenditures and Manpower, 1953-54*. The 173-page publication may be obtained for \$1 from the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C.

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The National Aeronautics and Space Administration has formed the Committee on an Equatorial Range to study the need for, and the technical feasibility of, an equatorial launching site. John P. Hagen, assistant director for program coordination in the Office of Space Flight Development, is chairman of the new group.

## Scientists in the News

The National Academy of Sciences-National Research Council recently announced the election of the following foreign associates.

V. A. AMBARTSUMIAN, director of the Burakan Observatory, Erevan, Soviet Armenia.

Sir EDWARD C. BULLARD, assistant director of research, department of geodesy and geophysics, Cambridge University, England.

MAX HARTMANN, Max Planck-Institute für Biologie, Tübingen, Germany.

W. V. HODGE, Lowndean professor of astronomy and geometry, Cambridge University, England.

NIELS BOHR, director of the Institute for Theoretical Physics at the University of Copenhagen, Denmark, and 1922 Nobel Prize winner, delivered an address at the dedication of the John Jay Hopkins Laboratory for Pure and Applied Science of the General Dynamics Corporation, on 25 June. The new laboratory is in San Diego, Calif.

The Gravity Research Foundation has announced the winners of its annual awards for the five best essays on gravity.

J. WEBER, professor at the University of Maryland, received the first award of \$1000.

M. E. ROSE, chief physicist at Oak Ridge National Laboratory, received the second award of \$300.

H. BONDI, professor at the University of London, King's College, received the third award of \$200.

HUSEYIN YILMAZ, Institute for Advanced Study, Princeton, N.J., received the fourth award of \$150.

MAURICE ALLAIS of Paris, received the fifth award of \$100, and O. COSTA DE BEAUREGARD, also of Paris, earned an honorable mention.

*Medicine and the Stars*, one of the first Japanese technical publications on space medicine, has been dedicated to HUBERTUS STRUGHOLD, professor of space medicine and adviser for research at the School of Aviation Medicine, Randolph Air Force Base, Tex. The book covers a great deal of the pioneer research work that Strughold and his colleagues began in 1947.

The American Academy of Arts and Sciences, at its 179th annual meeting, elected 113 new fellows from 19 states of the United States, and 21 foreign honorary members from 11 countries. Four women were included in this number, one of them, ANNA FREUD of London, being the fourth female foreign honorary member in the history of the academy. At the same meeting, officers for the academy for 1959-60 were elected. KIRTLEY F. MATHER, emeritus professor of geology at Harvard University, was reelected president for another year. The new foreign scientist members, including Dr. Freud, are as follows.

*Mathematics.* A. N. KOLMOGOROV, Academy of Sciences, Moscow, U.S.S.R.; JEAN LERAY, Collège de France, Paris.

*Physics.* MAX BORN, Edinburgh University, Bad Pyrmont, Germany; Sir WILLIAM L. BRAGG, Royal Institution, London, England.

*Astronomy.* MARCEL G. J. MINNAERT, University of Utrecht, Utrecht, Netherlands.

*Engineering sciences.* GEORGE K. BATCHELOR, University of Cambridge, Cambridge, England.

*Biophysics and biochemistry.* Sir JOHN C. ECCLES, Australian National University, Canberra; DAVID KEILIN, Cambridge University, Cambridge, England.

*Botany and bacteriology.* HITOSHI KIHARA, National Institute of Genetics, Misima, Japan.

*Zoology.* JEAN BRACHET, University of Brussels, Brussels, Belgium; PETER B. MEDAWAR, University College, London, England.

*Medicine.* Sir GEORGE W. PICKERING, Oxford University, Oxford, England.

*Social relations.* ANNA FREUD, London, England.