

value of the approach and recommends that groups concerned with any biological areas consider the organization of similar *ad hoc* panels to help stimulate re-examination of undergraduate courses. A limited number of reprints of the two reports are available from the committee, 2101 Constitution Ave., NW, Washington 25, D.C.

Winds in the Upper Atmosphere

Using rockets which release confetti-like aluminum chaff more than 50 miles above the earth, Army scientists are plotting winds in the upper atmosphere. With this new method, developed at the U.S. Army Signal Engineering Laboratories at Fort Monmouth, N.J., a cloud of chaff is released and tracked by radar to produce a fast and accurate wind profile. The chaff has been swept along at some 200 miles an hour by the winds. Continuous measurements have been made from the maximum altitude of 283,000 (about 54 miles) down to levels of less than 100,000 feet.

The results of recent tests at White Sands, N.M., and Patrick Air Force Base, Fla., show that the metallic chaff method can provide an unbroken map of wind speed and direction—the first time this has been possible at such altitudes. Findings on winds within the test zones show that they are generally easterly and have about the same speed as the westerly “jet streams” found at altitudes of 30,000 to 40,000 feet. Hans J. aufm Kampe and Dudley E. Cline of the Army Signal Corps, one a physicist and the other an engineer, have been active in the development of the new wind-measuring technique.

Proposed Legislation

Of the many bills introduced in Congress, some have a special relevance to science and education. A list of such bills recently introduced follows:

HR 11261. Establish a self-liquidating scholarship loan fund to enable highly qualified high-school graduates in financial need to receive a college education. Keating (R-N.Y.). House Education and Labor.

HR 11329. Amend title IV of Housing Act of 1950 to authorize loans under college housing loan program for construction of science buildings and libraries at educational institutions. O'Brien (D-N.Y.). House Banking and Currency.

HR 11392. Create a Department of Science and prescribe its functions and establish a U.S. Science Academy within such department. Christopher (D-Mo.). House Government Operations.

HR 11271. Provide for establishment

of Bureau of Older Persons within Department of Health, Education, and Welfare; authorize federal grants to assist in development and operation of studies and projects to help older persons. Ullman (D-Ore.). House Education and Labor.

HR 11414. Amend section 314(c) of Public Health Service Act, to authorize Surgeon General to make certain grants-in-aid for support of public or nonprofit educational institutions which provide training and services in fields of public health and in administration of state and local public-health programs. Rhodes (D-Pa.). House Interstate and Foreign Commerce.

HR 11363. Amend Communications Act of 1934 to prohibit subliminal projection by television stations. Hosmer (R-Calif.). House Interstate and Foreign Commerce.

S 3537. Encourage discovery, development, and production of manganese-bearing areas in U.S., its territories and possessions. Martin (R-Iowa). Senate Interior and Insular Affairs.

S 3539. Amend part VI of subtitle C, title 10, U.S.C. to authorize Secretary of Navy to take possession of naval oil shale reserves. Allott (R-Colo.). Senate Armed Services.

S 3606. Provide financial assistance to the states for educational purposes by returning to the states a portion of federal income taxes collected therein. Proxmire (D-Wis.). Senate Labor and Public Welfare.

HR 11776. Provide for national security through programs designed to increase the number of students in mathematics, science, engineering, and modern foreign languages in institutions of higher education. Provide additional facilities for teaching of such subjects. Assist teachers to increase their knowledge. Byrd (D-W.Va.). House Education and Labor.

HR 11785. Strengthen national defense, advance the cause of peace, and assure the intellectual pre-eminence of the United States, especially in science and technology, through programs designed to stimulate the development and increase the number of students in science, engineering, mathematics, modern foreign languages, and other disciplines. Provide additional facilities for the teaching thereof. Promote the development of technical skills essential to national defense. Assist teachers to increase their knowledge and improve their effectiveness. Gray (D-Ill.). House Education and Labor.

HR 11830. Provide for a federal program of loans to encourage and assist able and needy students to continue their education beyond the high-school level. Lane (D-Mass.). House Education and Labor.

HR 11833. Encourage expansion of teaching and research in education of mentally retarded children through grants to institutions of higher learning and to state educational agencies. May (R-Conn.). House Education and Labor.

HR 11854. Provide a federal grant program to assist the states and localities in the construction of schools. Engle (D-Calif.). House Education and Labor.

S 3582. Authorize the establishment of a Youth Conservation Corps to provide healthful outdoor training and employment for young men and to advance the conservation, development, and management of national resources of timber, soil and range, and of recreational areas. Humphrey (D-Minn.), Murray (D-Mont.), Neuberger (D-Ore.), Proxmire (D-Wis.), Jackson (D-Wash.). Senate Labor and Public Welfare.

S 3588. Amend title VI of the Public Health Service Act, as amended, in order to make certain clinics in rural areas eligible for federal aid to diagnostic or treatment centers. Payne (R-Me.), Flanders (R-Vt.). Senate Labor and Public Welfare.

S 3595. Amend section 406 of the Federal Food, Drug, and Cosmetic Act in order to provide that maximum concentrations for certain color additives used in coloring oranges be prescribed by regulation. Holland (D-Fla.). Senate Labor and Public Welfare.

HR 11835. Provide for holding a White House Conference on Aging to be called by the President of the United States before 31 December 1958, to be planned and conducted by the special staff on aging of the United States Department of Health, Education, and Welfare with the assistance and cooperation of other agencies of that department and of other departments and agencies represented on the Federal Council on Aging. Assist several states in conducting similar conferences on aging prior to the White House Conference on Aging. Rodino (D-N.J.). House Education and Labor.

S 3593. Amend the Atomic Energy Community Act of 1955 in order to authorize the Atomic Energy Commission to dispose of certain property for college purposes. Gore (D-Tenn.), Kefauver (D-Tenn.). Joint Atomic Energy.

S 3604. Amend the act of 3 March 1915, which established the National Advisory Committee for Aeronautics, and establish the National Astronautics Agency. Case (R-S.D.). Special Committee on Space and Astronautics.

HR 11860. Amend the act of 3 March 1915, as amended, to increase the scope of the activities of the National Advisory Committee for Aeronautics (renamed in this act the National Advisory Committee for Aeronautics and Astronautics),

to establish in the Congress a Joint Committee on Astronautics, and for other purposes. Fulton (R-Pa.). Select Committee on Astronautics and Space Exploration.

HR 11805. Promote the national defense by authorizing the construction of aeronautical research facilities by the National Advisory Committee for Aeronautics necessary to the effective prosecution of aeronautical research. Kitchin (D-N.C.). House Armed Services.

HR 520. Provide for printing as a House document the statement entitled "Introduction to Outer Space." Arends (R-Ill.). House Administration.

HR 11838. Supplement the act of 3 July 1952 by providing for construction of a full-scale demonstration plant in Ventura County, Santa Barbara County, San Luis Obispo County, or Monterey County, Calif., for the production of fresh water from salt water. Teague (R-Calif.). House Interior and Insular Affairs.

News Briefs

The Soviet Government news agency Tass announced on 15 April that Sputnik II, which contained the carcass of a dog, had disintegrated that morning over the Lesser Antilles, Brazil, and the Atlantic Ocean. During the satellite's 5½ months in orbit (it was launched 3 November 1957) it had completed about 2370 trips around the world. It is said to have traveled about 62 million miles.

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Thirty-six governments have now submitted a total of 1925 titles of scientific papers for presentation at the Second International Conference on the Peaceful Uses of Atomic Energy, to be held in Geneva, 1-13 September, by the United Nations. Approximately 900 abstracts have been proposed for presentation by the United States.

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The inaugural meeting of the Indian Society for Plant Physiology was held on 24 January at the University of Allahabad, when the constitution of the society was adopted and officers were elected. The president is P. Parija, vice-chancellor of Utkal University, Cuttack. Kenneth V. Thimann, professor of botany at Harvard University, was elected an honorary member.

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A special summer laboratory course in the techniques and applications of the electron microscope will be offered to senior biologists and medical research workers at Cornell University from 16 June through 3 July. The course, which is under the direction of Benjamin M. Siegel, is being sponsored by a grant from the National Science Foundation.

Well-known guest lecturers will participate. Requests for information should be addressed to Siegel at Rockefeller Hall, Cornell University, Ithaca, N.Y.

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The Atomic Energy Commission has released information on 15 past nuclear explosions, revealing that at least seven explosions took place in the Pacific in 1954 and 1956 that never were announced. A list of seismological data on the 15 tests is being distributed by the Division of Earth Sciences, National Academy of Sciences-National Research Council, Washington 25, D.C.

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The Experimental Boiling Water Reactor at Argonne National Laboratory of the Atomic Energy Commission, Lemont, Ill., was operated recently at a power level of 62,000 kilowatts of heat. This operating level is more than triple the original design operating level of 20,000 kilowatts. In December 1957 the EBWR was operated in experiments at 50,000 kilowatts of heat. The recent increase in the thermal output of the EBWR is a result of months of experimentation. Such an increase would increase the amount and reduce the unit cost of electricity produced by the plant if increased generating capacity were installed.

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A research team at the University of California's Radiation Laboratory has photographed the annihilation of an antineutron. This is considered the newest evidence of the great efficiency with which matter and antimatter destroy each other when they touch. Emilio Segrè announced the achievement on 11 April when he was lecturing at New York University.

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In only 4 years, world population grew by about 172 million. That equals the total population of the United States today. World population rose from 2.519 billion in 1951 to 2.691 billion in 1955, an increase of 118,000 persons each day.

The average annual rate of natural increase (excess of births over deaths) for the period was about 1.7 percent, the most rapid rate of growth in world history. These are a few of many highlights stressed in a recent United Nations report.

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State laws concerning private schools are reported in a new study, the first of its kind, by the U.S. Office of Education. A 152-page publication, *The State and Nonpublic Schools*, describes the legal framework within which these educational institutions operate and reports on the responsibilities of state departments of education in connection with them.

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Despite an increase in admissions, the population of this country's mental hos-

pitals continued to decline in 1957, according to a survey released recently by the American Psychiatric Association and the National Association for Mental Health. This is the second year of downturn in mental hospital rolls after a 25-year climb.

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The astronomy department of the University of California is organizing a conference for college teachers of astronomy between 7 July and 1 August. The conference will be sponsored jointly by the university and the National Science Foundation. The participants (limited to about 20 persons) will receive travel and living-expense allowances. Persons wishing to take part in the conference, which will be directed by Cecelia P. Gaposchkin of Harvard University, should write as soon as possible to the astronomy department of the University of California, Berkeley.

Scientists in the News

A memorial service honoring RUDOLPH MATAS, and the seventh presentation of the Rudolph Matas Award in vascular surgery, will be held on 9 May at the Tulane University School of Medicine. Dr. Matas, who died in September 1957 at the age of 97 years, served Tulane's department of surgery all of his adult life, becoming professor and head of the department in 1894.

The Matas award will be presented to JOHN H. GIBBON, JR., Samuel D. Gross professor of surgery and head of the department at Jefferson Medical College. He is being honored for his pioneering efforts in the field of extracorporeal circulation, which resulted in the development of a heart-lung apparatus.

HAROLD S. BLACK, research engineer for Bell Telephone Laboratories, Inc., is to receive the 1957 Lamme Gold Medal of the American Institute of Electrical Engineers "For his many outstanding contributions to telecommunications and allied electronic arts, especially the negative feedback amplifier and the successful development and application of the negative feedback amplification principle." The medal will be presented to Black on 23 June during the summer general meeting of AIEE in Buffalo, N.Y.

RUSSELL GIBSON has left the United States to take up a year's assignment in Pakistan, where he will advise on the search for atomic raw materials under the United Nations Technical Assistance Administration. Among Gibson's duties will be the undertaking of a preliminary survey. He will advise Pakistan's Atomic Energy Commission on a comprehensive program for an atomic