

Senate Subcommittee on Space

Senator Lyndon B. Johnson, chairman of the Senate Space Committee, has announced the establishment of a new subcommittee to investigate "wasteful rivalry and duplication" in space programs. It will be headed by Senator Stuart Symington (D-Mo.), a strong critic of Administration defense policies. Other senators on the seven-man subcommittee, which will start hearings and issue recommendations as soon as possible, are Thomas J. Dodd (D-Conn.); Howard W. Cannon (D-Nev.); Stephen M. Young (D-Ohio); Styles Bridges (R-N.H.); Margaret Chase Smith (R-Me.); and Clifford P. Case (R-N.J.).

High-School Science Demonstration-Lectures

Next fall scores of teachers, trained during the coming summer with the support of the National Science Foundation, will travel widely among secondary schools throughout the nation to stimulate student interest in science by providing science demonstration-lectures. During the summer groups of high-school science teachers will receive 3 months of special instruction in physics, chemistry, biology, and mathematics at four training centers—Michigan State University, Oklahoma State University, the University of Oregon, and the Oak Ridge Institute of Nuclear Studies. The University of Oregon training will include, in addition to the basic subjects, emphasis on those scientific topics of special interest to the Northwest.

The foundation estimates that teachers sponsored by the program will visit 3000 secondary schools during the year. To defray costs of the teachers' salaries, equipment, and travel, and the costs of selecting and training teachers, the NSF has made grants of \$349,700 to Michigan State University; \$335,700 to Oklahoma State University; and \$382,000 to the University of Oregon. Each university will select candidates from among applicants who, in general, are teaching in states representing the region which centers around the university.

Two grants, totaling \$531,600, to the Oak Ridge Institute of Nuclear Studies, cover expenses of (i) the regular summer-training program for 20 teachers selected by Oak Ridge from the Southeast; (ii) a special summer-training program for 20 teachers nominated by various states, under the terms of which teachers will return to the states from which they are nominated; and (iii) two additional training programs for 20 teachers each, also nominated by several states, one to begin in the

fall of 1959, the other in the spring of 1960.

The expanded program for the 1959-60 academic year is an outgrowth of a successful experimental demonstration-lecture program for seven teachers begun in 1956-57, and continued in 1957-58 with the establishment of a training center at Oak Ridge, sponsored jointly by the foundation and the Atomic Energy Commission. Concurrently with the lecture-demonstration training, the traveling teachers designed and built many pieces of apparatus for use in their subsequent visiting lectures. Many of these inexpensive "homemade" assemblies were used as models which later were duplicated by secondary-school teachers working with their students.

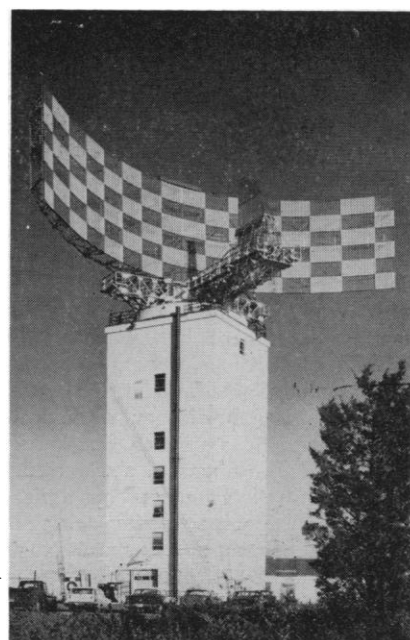
During the 1957-58 school year the traveling teachers made 1-week visits to 260 high schools throughout the country. They gave lecture-demonstrations during the day in the schools and were usually invited to provide extra lectures for parent and civic groups. In addition to the schools visited formally, other neighboring schools often served as hosts while the teacher was in the community, so that 892 schools (including some elementary schools) received at least one demonstration-lecture. More than 226,000 high-school students and some 5700 high-school teachers were reached in the 1957-58 program.

Applications for the 1959-60 Science Demonstration-Lecture Program should be sent to the appropriate program directors. They are as follows: Dr. Frederic B. Dutton, Science and Mathematics Teaching Center, Michigan State University, East Lansing, Mich.; Dr. W. W. Grigorieff, Chairman, University Relations Division, Oak Ridge Institute of Nuclear Studies, Inc., P.O. Box 117, Oak Ridge, Tenn.; Dr. Harry Alpert, Dean, Graduate School, University of Oregon, Eugene, Ore.; and Dr. Robert C. Fite, Director of Arts and Sciences Extension, Oklahoma State University, Stillwater, Okla.

Experimental Radar

Lincoln Laboratory of the Massachusetts Institute of Technology is operating a new experimental high-power search radar on Boston Hill in North Andover, Mass. The facility is the direct result of experimental work on a less powerful installation at Jughandle Hill, Bath, Me., which has now become a part of the experimental sector of the SAGE Air Defense System.

Lincoln Laboratory is engaged in electronic research on problems of air defense and is supported by the Army, Navy, and Air Force. Lincoln's tri-serv-



Massachusetts Institute of Technology experimental radar.

ice contract is administered by the Air Research and Development Command of the Air Force through the Air Force Cambridge Research Center in Bedford, Mass.

Even though the antenna assembly weighs more than 50 tons, it can be rotated at speeds up to 5 revolutions per minute in winds of 60 miles per hour and still maintain an accuracy of less than 0.1 degree. The reflector measures 120 feet wide and 30 feet high; it is 50 percent larger than the next largest of its type in operation.

In order to assure long life with continuing accuracy for such a large antenna, extensive effort was devoted to the design and fabrication of the bearing and structure on which the antenna is mounted. The four-point-contact azimuth bearing is the largest integral gear and ball bearing yet installed. It is 13½ feet in diameter and contains 110 3-inch bearings matched to 0.0001 inch.

The output or power tube of the transmitter is a 10-foot klystron that was constructed under Lincoln Laboratory sponsorship for use in this radar.

News Briefs

The United Nations Scientific Committee on the Effects of Atomic Radiation will begin its sixth session at UN Headquarters on 23 March. The main business of the session is expected to be consideration of the committee's future work as a consequence of a resolution on effects of atomic radiation adopted unanimously by the UN General Assembly in December 1958.

The resolution, among other things, commended the committee for the report it submitted in mid-1958 regarding the effects of atomic radiation; requested the committee "to continue its useful work and report to the Assembly as appropriate"; asked the committee to consult with other agencies and organizations concerned to insure effective coordination of activities; and requested the Secretary-General to continue to provide the committee with assistance.

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An interagency research advisory committee has been formed by representatives of the Alaska Department of Health, Alaska Native Health Service (U.S. Public Health Service), Arctic Aeromedical Laboratory (U.S. Air Force), and Arctic Health Research Center (U.S. Public Health Service) to assist scientific investigators in medical and allied fields who wish to perform research in Alaska. The committee is prepared to assist investigators sponsored by a recognized institution by explaining local situations, in meeting logistic difficulties, and making Alaskan facilities available. Persons desiring such assistance should write to E. M. Scott, Chairman, Interagency Research Advisory Committee, Arctic Health Research Center, Box 960, Anchorage, Alaska.

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Announcement has been made by the National Academy of Sciences-National Research Council that the committee on animal care of the Institute of Laboratory Animal Resources, after consultation with various professional societies and research workers, has proposed certain general principles for the treatment and use of animals in laboratories and schools. *Principles of Laboratory Animal Care* is intended for workers in universities and industries, and *Guiding Principles in the Use of Animals by Secondary School Students and Science Club Members* is directed to students and science teachers. Reprints of both statements are available from the Executive Secretary, Institute of Laboratory Animal Resources, National Research Council, 2101 Constitution Avenue, NW, Washington 25, D.C.

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A record 94,400 full-time university-grade students were in attendance at Canadian universities and colleges on 1 Dec. 1958, some 9.1 percent above the 1957-58 total of 86,500, according to advance figures released by the Dominion Bureau of Statistics.

New peaks in enrollment were established in the current academic year in the four Atlantic provinces and in Quebec, Alberta, and British Columbia, while enrollment in Ontario and Saskatchewan was approaching the record set in the 1947-48 session.

A private collection of moths and butterflies native to the United States—the results of a lifetime devoted to the task of collecting examples of the more than 5000 known species—has been acquired by the American Museum of Natural History.

The collection of the late Otto Buckholz of Roselle Park, N.J., numbering 125,000 specimens and including approximately 95 percent of the more than 5000 species of butterflies and the larger moths found in this country, has been purchased by friends of the museum for the department of insects and spiders. The collection will be available for study by scientists and students.

Grants, Fellowships, and Awards

Agricultural chemistry. The Association of Official Agricultural Chemists has announced that nominations are now being accepted for the third AOAC Harvey W. Wiley Award for Achievement in Analytical Methods. This \$500 award goes to the scientist who makes an outstanding contribution to the development of methods of analysis for foods, drugs, cosmetics, feeds, fertilizers, and pesticides, or for use in general analytical chemistry. Nominations must be submitted by 1 April. Nominees need not be members of the association. Further information may be obtained from the secretary, William Horwitz, Box 540, Benjamin Franklin Station, Washington 4, D.C.

Biological sciences. The Division of Biological and Medical Sciences of the National Science Foundation has announced that the next closing date for receipt of basic research proposals in the life sciences is 15 May. Proposals received prior to that date will be reviewed at the summer meetings of the foundation's advisory panels, and disposition will be made approximately 4 months following the closing date. Inquiries should be addressed to the National Science Foundation, Washington 25, D.C.

General. The Karl P. Schmidt Fund has modest sums available to assist persons wishing to study at the Chicago Natural History Museum. Grants will be made for study in any of the four fields encompassed by the museum: anthropology (with a natural history orientation), botany, geology (including paleontology), and zoology. An applicant should describe the study proposed in brief terms, state the length of time he wishes to study at the museum and the amount of money needed, and name one reference. Applications should be mailed to: Chairman, Karl P. Schmidt Fund, Chicago Natural History Museum, Roosevelt Road and Lake Shore Drive, Chicago 5, Ill.

Scientists in the News

President Eisenhower has named five scientists to his 18-member Science Advisory Committee. The new appointees, four of whom are replacements, are as follows:

EMANUEL R. PIORE, physicist and electronics engineer and director of research for International Business Machines.

CYRIL S. SMITH, professor of metallurgy at the University of Chicago, and member of the General Advisory Committee of the Atomic Energy Commission.

GLEN T. SEABORG, Nobel Prize winner and professor of chemistry at the University of California.

BRITTON CHANCE, biophysicist and director of the Johnson Foundation of the University of Pennsylvania.

JOHN BARDEEN, professor of physics and electrical engineering at the University of Illinois.

Lord PLOWDEN, chairman of the United Kingdom Atomic Energy Authority, recently visited U.S. atomic energy installations on invitation by John McCone, chairman of the U.S. Atomic Energy Commission. McCone and Willard F. Libby, AEC Commissioner, visited Britain's principal atomic power and research centers in November of last year.

WILLARD F. LIBBY, scientist member of the Atomic Energy Commission, has been appointed professor of chemistry at the University of California, Los Angeles.

IRA H. ABBOTT, assistant director of research (aerodynamics and flight mechanics), National Aeronautics and Space Administration, has been appointed deputy director of aeronautical and space research. He will continue to serve in his present position as well.

D. W. JUENKER, assistant professor of physics at Notre Dame University, has received the 1958 Young Author Award of the National Association of Corrosion Engineers for a paper on "Cavity Formation in Iron Oxide" that he wrote in collaboration with R. A. Meussner and C. E. Birchenall.

THOMAS M. HAHN, Jr., head of the department of physics at Virginia Polytechnical Institute, has been appointed dean of arts and sciences at Kansas State College, effective 1 September.

FRANK H. T. RHODES, head of the department of geology at University College, Swansea, Wales, will be a