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.

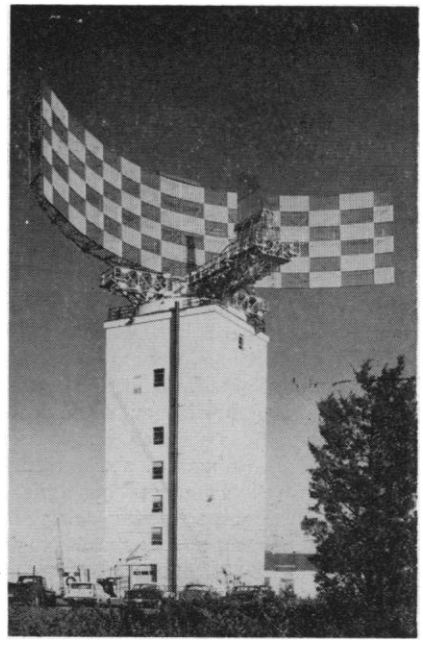
During the 1957–58 school year the traveling teachers made 1-week visits to 260 high schools throughout the country. They gave lecture-demonstrations during the day in the schools and were usually invited to provide extra lectures for parent and civic groups. In addition to the schools visited formally, 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-service contract is administered by the Air Research and Development Command of the Air Force through the Air Force Cambridge Research Center in Bedford, Mass.



Massachusetts Institute of Technology experimental radar.

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.