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# Miscellany

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## US-USSR Exchange Program

Meeting in Washington last November, US Atomic Energy Commission chairman John A. McCone and the head of the Administration for Utilization of Atomic Energy in the Soviet Union, Vasily S. Yemelyanov, outlined plans for the early exchange of Soviet and US scientists as a first step towards the possible establishment of cooperative programs in some areas of research on the peaceful uses of atomic energy. This projected atomic reciprocity is included in the cultural and technical exchange program of the US and the USSR, which was recently extended for two years by the signing of an agreement in Moscow by US Ambassador Lewellyn Thompson and Georgi A. Zhukov, chairman of the State Committee for Cultural Relations with Foreign Countries. The two nations have also agreed to work out arrangements for more efficient and effective exchange of the results of research, and Prof. Yemelyanov is reported to have suggested the desirability of considering the joint construction and operation of large accelerators. All details of the cooperative program are to be coordinated with the work of the International Atomic Energy Agency in Vienna.

The cultural and technical exchange agreement also calls for further exchange of scholars, students, and teachers of Russian and English. In addition, there will be cooperation by American and Soviet public health agencies and medical research institutions in attacking the problems of cancer, heart disease, and polio. Both governments have agreed to facilitate publication in their own journals of the other's important research, and it has been suggested that twenty ranking American and Soviet medical research specialists be exchanged. The number of technical delegations to study manufacturing and construction industries and techniques has been increased from two to eight.

Another hopeful indication of future international cooperation in science and technology is the recent signing by nine nations, including both the US and the USSR, of a new charter for the Committee on Space Research. The Committee, which is concerned with encouraging international cooperation in rocket and satellite research, was organized under the auspices of the International Council of Scientific Unions, first met in London in 1958, and is open to all national academies of science actively taking part in space studies. The Committee is scheduled to hold another session this month in France on the occasion of the First International Space Science Symposium in Nice.

## Facilities

Still on schedule, or perhaps somewhat ahead of schedule, the multibillion-volt proton synchrotron at the CERN Laboratory in Geneva went into operation for the first time on November 24, and did so in a thoroughly impressive manner by attaining a very close approximation of its estimated 25-Bev design energy. News of the successful trial reached the Thanksgiving Meeting of the American Physical Society in Cleveland that same week, the announcement being made by the Society's vice president, Victor F. Weisskopf of the Massachusetts Institute of Technology, who reported that the CERN group had managed to produce a 24-Bev proton beam with a pulse of 10 billion protons every three seconds. Construction work on what is now the world's largest accelerator has been in progress for the past five years, and the target period for trial operations was long ago established as being late 1959 or early 1960.

Oak Ridge National Laboratory has commenced work on a new building to house its proposed 76-inch cyclotron, designed to accommodate experiments with a variety of particles over a broad range of energies up to about 100 Mev. The "relativistic isochronous" cyclotron, as it is called, belongs to a new class, identified by an azimuthally varying magnetic field, and is expected to be one of the most versatile medium-energy accelerators in existence. It will be ORNL's third cyclotron. The others are an 86-inch, 23-Mev proton accelerator and a 63-inch cyclotron which accelerates nitrogen ions to 27 Mev.

Also at Oak Ridge, as a part of ORNL's current expansion program, a new plant for reprocessing fuel elements from a variety of power reactors will be constructed this year. The building will house two cells lined with stainless steel and shielded by six feet of concrete. It will be serviced by an underwater fuel element storage canal capable of handling core components as long as 14 feet and weighing up to 1000 pounds.

Concentrating on solid-state physics, especially in fields of micro-miniaturization, ferromagnetics, and photoconductors, an Applied Research Department has been established by Librascope, Inc., Glendale, California. The department, under the direction of Wayne Blackburn, will complement the firm's existing Advanced Research Group, which is concerned with the development of computer memory techniques for data processors and computing systems.

## Space Sciences

The first of three experimental satellites which the National Aeronautics and Space Administration plans to launch under its "Project Echo" is scheduled to be sent aloft this spring and placed in a 1000-mile-high orbit that will make it visible in all countries between 50° north and 50° south latitude. Designed to serve as