International Geological Congress Convenes

Geologists from all points of the compass will converge on the Nordic countries for the 21st International Geological Congress, which will convene in Copenhagen on 15 August. The congress will be in session until 25 August.

The International Geological Congress, the oldest international scientific congress in existence, was conceived and primarily founded by American geologists. The desirability of organizing an international geological congress was called to the attention of the American Association for the Advancement of Science in 1876 at its annual meeting in Buffalo, New York.

The general plan for organizing an international congress was approved, and the founding committee was appointed. The first International Geological Congress was held in Paris during the 1878 International Exposition. Its success was so clear-cut that it has continued to convene about once in 4 years ever since the original Paris meeting. Although it has no permanent organization and is dependent for its continuity on invitations received from delegates of some country during a meeting, it has functioned amazingly well.

The scientific sessions generally last about a week and are of great interest to most of the participants, but the field excursions that usually precede and follow the scientific sessions are as much of a drawing card as the scientific sessions themselves. These excursions have ranged in duration from 1 day to 3 weeks.

The host countries to this 21st International Geological Congress will be the five Nordic nations: Norway, Sweden, Iceland, Finland, and Denmark.

Standards Bureau To Build Facilities in Peru

Continuing 15 years of international scientific cooperation, the Instituto Geofisico de Huancayo, Peruvian counterpart of the U.S. National Bureau of Standards, has smoothed the way for NBS construction and operation of a very high-powered transmitter-receiver near Lima for space exploration by radar. Peruvian and United States officials have reached the final stages of negotiating a treaty and contract covering the use and operation of the mountain-valley installation. A special Congressional appropriation of $550,000 for the current fiscal year will finance construction and equipment.

On 1 August a four-man team from the Boulder Laboratories of the National Bureau of Standards arrived in Peru to begin work with the Instituto Geofisico on preparation of a site that is about 10 miles from Lima. The advance party consists of Kenneth L. Bowles, Gerard R. Ochs, Glen F. Miller, and John L. Green.

Ochs and Miller will remain in Peru to assist in directing the work of clearing and leveling the site and, as soon as this is complete, of putting up a prototype antenna whose features are to be incorporated in the final antenna design. They will also assist in supervising the construction of the building, collecting materials for constructing the equipment, and establishing a direct communications system with the Central Radio Propagation Laboratory at Boulder, Colo.

Tours of duty at the installation will be for several years, with a probable minimum of two. To foster international ties, the NBS staff and their families have had intensive instruction in Spanish. They will also avoid the traditional "foreign settlement" by renting private housing in Chaclacayo, a town on the fringe of Lima.

New Method of Space Exploration

Space-exploration by radar uses a new technique, developed by Bowles, for studying the ionosphere and exosphere with equipment located entirely on the ground. A preliminary experiment, conducted at Long Branch, Ill., from early 1958 through April 1960, gave satisfactory results out to 400 miles above the earth's surface. The method employs a transmitter with a peak pulse power of 6 megawatts which sends out from the earth a very high frequency wave, lasting from 50 to 150 microseconds, and an extremely sensitive broadside antenna of great area which detects the faint reradiation of the pulsed radio wave by free electrons in the upper atmosphere.

The new installation at the magnetic equator is expected to permit observations to be made at altitudes up to 1800 miles (3000 km), and to extend the capabilities of the technique to measure such characteristics of the atmosphere as ion temperature, percentage ion composition, and intensity of the earth's magnetic field. Accurate measurement of the last two of these quantities depends upon locating the radar within approximately 5 degrees latitude from the earth's magnetic equator, one reason for the choice of site. An additional feature of the new radar system will be the capability of observing the sun by means of direct radio reflections, with a sensitivity greater than that ever used before.

Science Foundation Announces Program of Institutional Grants

An experimental program of institutional grants was announced recently by the National Science Foundation. This program will be under the direction of a new Office of Institutional Programs, headed by Louis Levin. Levin has been deputy director of the foundation's Division of Biological and Medical Sciences.

The institutional grants are designed to strengthen the over-all scientific research and research-training effort of colleges and universities. The awards are intended to provide institutions with valuable flexibility for strengthening and balancing scientific research activities without specifying the particular activities to be undertaken with the funds. Institutional grants will complement foundation support of science and science education now provided through research grants for specific projects and through fellowships.

Amounts of grants allowable to an institution under the new program will be limited to 5 percent of foundation research grant payments made to the institution during the previous year, and in any case will not exceed $50,000 for any one fiscal year. During the first year of operation, institutional grants will be based on the 9-month period from 1 July 1960 through 31 March 1961. In succeeding years, they will be based on a full 12-month period, 1 April through 31 March. Institutions will be required to report to the Foundation each year on the use of the institutional grant funds.

The Office of Institutional Grants will also handle the foundation's program for the development of graduate research laboratories under which grants are made for modernization and expansion of research laboratories in United States universities.