mary, which pointed out the inability of existing institutions to cope with increasing data from world seismograph stations. Readings from these stations will be used at the new center to locate the positions of origin of all earthquakes which can be detected. This figure is currently estimated to total about 30 000 events per year. The readings are intended to provide a basis for a variety of research and engineering projects, including studies of the earth's interior, investigations of local crust-deformation phenomena, and estimates of earthquake hazards in developing countries.

Japanese-American Instrument Tests

In mid-October, a group of Japanese scientists joined a US Coast and Geodetic Survey team aboard the Survey's ship *Pioneer* in San Francisco to carry out intercalibration tests of gravity meters and magnetometers made in the United States and in Japan. The testing program, conducted on the oceanographic equipment evaluation range in the Pacific, will compare the La-Coste gravity meter with Japan's Tsuboi single-string gravity meter. Two American-made magnetometers, the Warren-Vacquier and the Varian Proton, will be compared with the Japanese Rikitake-Uyeda magnetometer.

The joint project was arranged under the terms of recommendations made by the US-Japan Committee on Scientific Cooperation, which has called for close cooperation in certain areas of research by scientists from the two countries. United States participation is supported by the Coast and Geodetic Survey, and scientific arrangements for the bilateral program are coordinated in the United States by the National Science Foundation at the request of the Department of State.

Arctic Cosmic-Ray Station

A solar cosmic ray research station has been established at Shepherd Bay, N. W. T., Canada, by the National Science Foundation and Douglas Aircraft Company. Its location is the geomagnetic conjugate point of a similar geophysical station at McMurdo Sound in Antarctica.

Operated by Douglas for the NSF, the solar flare monitoring center will utilize two riometers working at thirty and fifty megacycles, respectively, a dopplometer, and a spherics receiver operating at twenty-seven kilocycles.

Primary objectives of the cosmic ray research at Shepherd Bay are to investigate the possible existence of periodic variations in solar flare absorption events and to determine the nature and properties of the emitted radiation. This information would be used in scheduling launching of lunar or interplanetary flights to coincide with times of least cosmic ray bombardment.

Data from both polar stations, which will be made available to scientists through World Data Center "A" in Boulder, Colo., will be part of the US International Year of the Quiet Sun program.