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UNITED STATES NATIONAL COMMITTEE
INTERNATIONAL GEOPHYSICAL YEAR 1957-1958

OUTLINE OF INTERNATIONAL GEOPHYSICAL YEAR PROGRAM

During the International Geophysical Year, 1957 - 1958, the world's scientists will conduct the most comprehensive study of the earth ever undertaken. Intensive investigations throughout the world will be carried out in meteorology, latitude and longitude determinations, geomagnetism, gravity measurements, ionospheric physics, aurora and airglow, solar activity, cosmic rays, glaciology, oceanography, seismology, and rocket exploration of the upper atmosphere. Forty nations will participate: Argentina, Australia, Austria, Belgium, Brazil, Burma, Canada, Chile, Czechoslovakia, Denmark, Finland, France, East Germany, West Germany, Great Britain, Greece, Hungary, Iceland, India, Ireland, Israel, Italy, Japan, Mexico, Morocco, Netherlands, New Zealand, Norway, Pakistan, Peru, Philippines, Spain, Sweden, Switzerland, Thailand, Tunisia, Union of South Africa, USSR, United States, and Yugoslavia. Each country will plan and execute its own program, under a general plan developed by a coordinating international committee.

Our environment, particularly the atmosphere and the oceans, affects the daily lives of all individuals, the transactions of commerce and industry, the safe conduct of land, sea, and air travel and transportation, and the range and reliability of all radio communication and navigation systems. It is the intensive study of the large scale aspects of this environment which will be carried out during the IGY, from the middle of 1957 through 1958. Each of the fields in the program is characterized by its global nature and its relation to solar energy fluctuations and disturbances. Measurements must be made simultaneously so that the relationships between fields can be determined on the basis of world-wide coverage.

The U. S. National Committee for the International Geophysical Year, established by the National Academy of Sciences, is in charge of planning, directing, and executing the U. S. program. The Committee and its technical panels, which include many of the nation's leading geophysicists, have developed the U. S. program in cooperation with many universities, institutions, and agencies. Federal sponsorship and support for the program has been obtained by the Committee through the National Science Foundation, the government agency charged with responsibilities for Federally-supported basic research.

One of the controlling fields in this research program is solar activity, for the sun dominates activities on our planet and is the major source of energy for the earth and for all life. Some solar effects strongly influence the upper atmosphere, the weather, and radio communications. Throughout the IGY continuous measurements will be made of changes in the radiative energy output of the sun over the whole range of wave-lengths or colors, not only visible light, but down to the invisible x-rays and up to the radio waves.