

THE INTERNATIONAL GEOPHYSICAL YEAR*

The International Geophysical Year is a world-wide organization by scientists, the objective of which is to concentrate on measurements of the earth and its atmosphere for a period of eighteen months. Eighteen months were chosen because of climatic differences between the Arctic and Antarctic. Access is convenient during the warm periods in the two areas which, of course, are six months apart.

This is the third such program of international scientific co-operation. The first two in 1882-83 and 1932-33 were known as International Polar Years and were limited to geophysical measurements in polar areas, mostly in the Arctic. The current effort was expanded to include the whole earth. The program was planned mainly for the solution of problems that require measurements over the whole surface of the earth for their solution.

The period selected was from July 1, 1957 to Dec. 31, 1958. At the time of writing this period is about three-quarters completed but it is still too early to present the results of the effort in any detail. Some of the data obviously cannot be analysed completely until the program is over and in many phases of the work it is several months before the results can be put in a form for distribution. For instance, an examination of the reports from World Data Centres shows that on July 1, 1958, when the IGY was two-thirds completed, on the average only about six months' data had been received.

A note about the distribution of data may be of interest. Four World Data Centres have been organized by the International Committee for the IGY. The two primary centres (A and B) are in the United States and in the Union of Soviet Socialist Republics. The other two centres (C and D) are in Western Europe and in Japan. The exact location of the Data Centre in each case depends on the discipline and the centres are located in the most obvious headquarters for research in the project concerned. For instance, in the United States the World Data Centre A for meteorology is in the United States Weather Bureau at Washington while for the ionosphere it is at the Central Radio Propagation Laboratories of the National Bureau of Standards at Boulder, Colorado.

These World Data Centres have the duty of maintaining a catalogue and copies of all the IGY data, which will be considerable in volume. All of the 3,500 proposed IGY stations (it is not known at the time of writing how many actually have been established but the numbers proposed that could not be established is not expected to be large) were asked to send their data to all four Data Centres although it was agreed that if four copies were not available one Data Centre would reproduce it for the others. Further distribution is being made to any research group taking part in the IGY on payment of the cost of reproduction.

The fifteen disciplines are listed as follows:—

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| I. World Days | IX. Glaciology |
| II. Meteorology | X. Oceanography |
| III. Geomagnetism | XI. Rockets and Satellites |
| IV. Aurora and Airglow | XII. Seismology |
| V. Ionosphere | XIII. Gravity |
| VI. Solar Activity | XIV. Radioactivity in the Earth's
Atmosphere |
| VII. Cosmic Rays | XV. Meteor Studies |
| VIII. Longitudes and Latitudes | |

Meteor Studies is not included as a separate field in the international program but is listed separately in the Canadian program because the study of the upper atmosphere by the examination of meteor trails is an important subject in the National Research Council's Upper Atmosphere Research Group. In the 1957-58 edition of the Canada Year Book at pp. 35-37 there is a short review of the objectives in each of these disciplines. The first, *World Days*, should hardly be considered a discipline but since a working committee was formed for it parallel to those in the other divisions of geophysics it is listed as such. Certain periods known as world days or world intervals have been chosen during which a

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