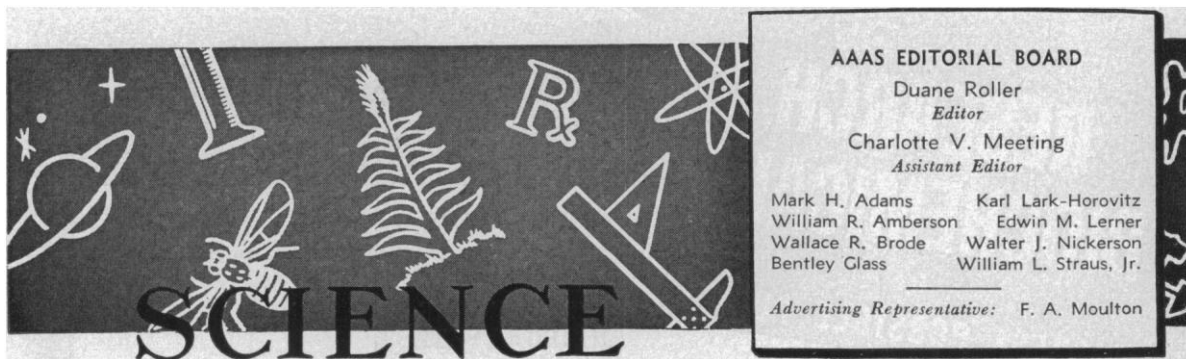




The International Geophysical Year, 1957-58

THE International Geophysical Year 1957-58 will be the successor, after a 25-year interval, of the Second Polar Year (1932-33), 50 years after the First Polar Year (1882-83). Studies during these polar years, largely in the north polar regions, were concerned with meteorology, geomagnetism, aurora and, in 1932-33, the ionosphere. The present international program calls for worldwide observations and measurements in some 10 fields of geophysics.

The basic philosophy of the program has been to plan observations that will replace the long-time averages of geophysical observations, taken at relatively few locations on the earth and limited in frequency as well, by an increased spread of observations in space and by a carefully planned increase in the frequency of these observations. We might say that time will, in a sense, be replaced by space. An important consideration in the preliminary formulation of the international program has been, quite properly, the need for synoptic data in the several fields, both individually and collectively.

The principal disciplines in the program are solar activity, longitude and latitude determinations, meteorology, oceanography, glaciology, ionospheric physics, aurora and airglow, geomagnetism, cosmic rays, and rocket exploration of the upper atmosphere. During the 1957-58 period of intensive study, a plan of World Days will insure simultaneous observations in affected fields when unusual geophysical activity is prevalent—for example, intervals of unusual magnetic, ionospheric, auroral, or solar activity and disturbances.

The U.S. National Committee (USNC) for the IGY, which was formed in Feb. 1953, by the National Academy of Sciences-National Research Council to develop the American program, had as its first task the preparation of tentative proposals for submission to the Special Committee for the International Geophysical Year (CSAGI) of the International Council of Scientific Unions. The haste with which these proposals were prepared is indicated by the fact that the Special Committee considered them,

along with those submitted by other national committees, at a meeting in Brussels last June 30-July 3.

On Nov. 5 and 6, the USNC met again to discuss the draft resolutions adopted by the CSAGI at Brussels. In addition, it appointed a coordinating group to develop and draft the scientific program to be carried out by the United States. Members of this group were designated as reporters on specific portions of the program. Members of both the committee and the coordinating group are listed elsewhere in this issue.

The subsequent activities of the USNC and its reporters have been dictated by a series of deadlines, the first of which was the presentation of the program to the National Science Board on Dec. 7, 1953. This was the result of a recommendation by the NAS-NRC that the National Science Foundation be the agency responsible for obtaining Federal support. The Board responded favorably and asked the USNC to prepare a detailed program and budget for presentation at its meeting on Jan. 29. This request was carried out, and the Board accepted the NAS-NRC recommendation. The reporters were again called upon to help in the preparation of a more detailed program and budget document.

The USNC will meet again on April 8 and 9 to adopt and revise the scientific program to be sent to the secretary general of the CSAGI by May 15. This will be considered, with the reports of more than 28 other national committees, at a meeting of the CSAGI in Rome, Oct. 1-4.

In an article to be published in *Science*, L. V. Berkner, vice president of the CSAGI, will present other aspects of this important international scientific effort. The writer, chairman of the USNC, has been ably and generously assisted by the combined staffs of the NSF and the NAS-NRC, and in particular by Alan Shapley, vice chairman, and Hugh Odishaw, administrative secretary, during these hectic and harried months. It is hoped that this brief summary, together with other articles which will appear from time to time, will give readers of *Science* a feeling for the scope and importance of the IGY, and a desire to help with their comments, criticisms, and participation.

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