

Resolutions adopted by the XIth General Assembly

Resolution N° 1

The International Union of Geodesy and Geophysics

CONSIDERING that it is the desire of the German Academies of Science to adhere as a common group to the I.U.G.G. under the name of "Germany",

AGREES to accept the common adherence in Category 8

RECOMMENDS that the interested academies make arrangements to implement the above and report to the Union.

Resolution N° 2

The International Union of Geodesy and Geophysics

RECOMMENDS that the General Secretary explore the possibility of a common adherence to the Union of the two Academies of Peking and Taipei and report to the Council, and that decision on the present application of Taipei to join the Union be deferred.

Resolution N° 3

The International Union of Geodesy and Geophysics

RECOMMENDS that the General Secretary be asked to collect information about the extent to which the "Union Geofisica de Cuba" effectively represents all Geodesy and Geophysics in the country, and report to the Council, and that further action on the application of the "Union Geofisica de Cuba" be deferred until that report is received.

Resolution N° 4

The International Union of Geodesy and Geophysics

CONSIDERING that the recent development of instruments for the precise measurement of lines in a triangulation or trilateration network requires an accurate value for the velocity of light, and

CONSIDERING that the International Radio Scientific Union has recently adopted a value of 299,792.5 0.4 km/sec in vacuo,

RECOMMENDS that all associated organizations adopt this value for the measurement of lengths whenever light or electro-magnetic waves are involved and continue their efforts towards a further refinement of this value.

Resolution N° 5

The International Union of Geodesy and Geophysics

TAKING NOTE of the important results obtained by the International Commission of European Levelling,

CONSIDERING that the greater the area covered by the unified network, the greater the interest it affords.

RESOLVES

that the results obtained for the European Network be extended as soon as possible to those neighbouring nations which have taken part in earlier deliberations without having yet sent in the results of their observations and to those which have not yet taken part in those deliberations.

that all countries adhering to the International Union of Geodesy and Geophysics adopt the scientific decisions taken at Florence in 1955 by the same Commission concerning gravity potential and the method of determining it.

that similar general adjustments be undertaken in other parts of the world for other contiguous levelling networks.

Resolution N° 6

The International Union of Geodesy and Geophysics

CONSIDERING that for various physical purposes the best available value for the correction to the Potsdam system is frequently required, and considering that a definitive correction has not yet been determined:

RECOMMENDS that for the time being the correction to the Potsdam system be assumed to lie between -10 and -12 milligals, on the basis of existing experimental data and connections between absolute stations.

Resolution N° 7

The International Union of Geodesy and Geophysics

WELCOMES the observation of the geoidal sections which have been carried out in response to the Resolution N° 24, adopted at Rome in 1954, and reaffirms that Resolution.

ASKS FOR

- a. The early completion of the Geoidal Section through Italy, Greece and Turkey;
- b. The inclusion of observations of the deviation, at intervals of at most 30 miles, in the primary triangulation now being carried out in Iran between Turkey and Pakistan;
- c. The early observation of the proposed geoidal section through Spain from the Pyrenees to Gibraltar;
- d. The publication of the deviations to the nearest sexagesimal second in terms of the European Datum (Potsdam) at all the astronomical stations in the USSR. It is only necessary to give the location of these stations to the nearest sexagesimal minute.
- e. The determination by the most practicable means of the separation between the geoid and the European Datum Spheroid:
 1. On the North African coast, South of Crete
 2. At some point in North America.

Resolution N° 8

The International Union of Geodesy and Geophysics

RECOMMENDS that a uniform system of maps of Bouguer anomalies on the scale of 1 M, with the anomalies calculated on the basis of the density of topography being 2.67g/cm³, should be prepared within each country.

It will be possible and desirable to use these maps in association with maps of different types of isostatic corrections on the same scale.

More detailed maps on larger scales should show the Bouguer anomalies computed with the best available values of the density of the topography, the values used being stated; if, however, it is desired to use a standard density, the value should be 2.67 g/cm³.

Resolution N° 9

The International Union of Geodesy and Geophysics

RECOMMENDS that the basic observations and computations required for the application of gravity measurement to geophysical studies should be carried out within each country and should be carried as far as the calculation of the topographic correction (Geländerreduktion). This calculation should preferably be extended to 167 km and at the least to 28.8 km radius.

Resolution N° 10

The International Union of Geodesy and Geophysics

NOTES the decreasing allocation from the International Council of Scientific Unions (I.C.S.U.) grant to finance the International Seismological Summary (I.S.S.). This reduction will make it impossible to continue to overtake the arrears of publication, which is at present one of the pressing problems of the I.S.S. If the I.S.S. should again fall into arrears the British Treasury is likely to discontinue its subvention, in which case the work would cease altogether.

WISHES to assert the vital importance to studies of the Earth's interior of continuing this task in an adequate manner;

SUGGESTS to this end to deal with the increase in the number of stations at the cost of publication that a subvention of at least \$10,000 is required annually from the I.C.S.U.

Resolution N° 11

The International Union of Geodesy and Geophysics

CONSIDERING that the composition of the Earth's mantle below the Mohorovičić discontinuity is one of the most important unsolved problems of geophysics,

and that, although seismic, gravity and magnetic observations have given significant indications of the nature of this material, actual samples that could be examined petrographically, physically and chemically are essential

and that modern techniques of drilling deep wells are rapidly developing to the point where drilling a hole 10 to 15 km deep on an oceanic island may well be feasible

and that the crustal material above the Mohorovičić discontinuity is also of prime interest

URGES the nations of the World and especially those experienced in deep drilling to study the feasibility and cost of an attempt to drill to the Mohorovičić discontinuity at a place where it approaches the surface.

Resolution N° 12

The International Union of Geodesy and Geophysics

CONSIDERING that it has been shown by seismic work that sediments in the deep ocean are thin and whereas it seems possible that techniques could be developed to drill through them and to examine the nature of the sediments and of the subjacent crustal rock

RECOMMENDS the development and use of techniques for drilling through these sediments at sea, be supported.

THE 19th GENERAL ASSEMBLY

Resolution N° 13

The International Union of Geodesy and Geophysics

RECOGNIZING that the observing network of ozone measurements, developed mainly by the International Ozone Commission, requires that the standardization, collection, analysis and publication of the data should be put on a permanent basis,

RESOLVES that negotiations with this end in view should be initiated with WMO as soon as possible.

The negotiations should be on the following basis:

"To review the position arising from the development of a wide network of stations for the measurement of atmospheric ozone and to make recommendations to WMO and to IUGG for the further development and improvement of the observations and to ensure the standardization, collection, analysis and publication of the data on a permanent basis and in a form suited to the needs both of Meteorological Services and of research workers".

Resolution N° 14

The International Union of Geodesy and Geophysics

RECOGNIZES that, despite great progress in recent years, our knowledge of circulations in planetary atmospheres and hydrospheres leaves many questions unanswered. New fundamental approaches may be needed in order to arrive at satisfactory models of circulations in rotating baroclinic fluids and in magneto-hydrodynamics.

ENDORSES the proposal made by the International Scientific Radio Union (URSI) at the 1957 Boulder Meeting to bring together experts on these subjects from various countries for an extensive summer workshop or conference.

Resolution N° 15

The International Union of Geodesy and Geophysics

CONSIDERING that in some countries the use of direct current for railways makes it impossible to observe in those countries the natural geomagnetic time-variations which provide valuable information on geophysical features of practical importance as well as on cosmic influences affecting the Earth.

RECOMMENDS the use of alternating current electric power.

Resolution N° 16

The International Union of Geodesy and Geophysics

CONSIDERING that the need for World magnetic surveys stems from two principal sources, as follows

1. The requirement for data for theoretical studies of the source and origin of the earth's magnetic field and of the secular changes occurring therein,
2. The preparation of more accurate world magnetic charts as a primary source of information for nautical and aeronautical navigation.

RECOMMENDS that

the principal maritime and aeronautical nations should share the task of a world magnetic survey by sea and air;

all countries which can do so plan and execute individual magnetic surveys of a type which will contribute to a unified world survey as prepared by the Association of Geomagnetism and Aeronomy.

all countries give consideration to the establishment of airborne magnetic surveys to provide data on all elements of the geomagnetic field, and that such surveys be extended to all feasible areas whether adjacent to or remote from the operating

countries, in order to establish world-wide continuity.

the USSR, now operating a non-magnetic survey ship, should give primary attention to areas of (a) Indian Ocean, (b) South Atlantic Ocean, and (c) South Pacific Ocean, which will be difficult to cover by airborne survey equipment.

all other countries which can do so, give consideration to arrangements for making magnetic measurements at sea.

the USA and Canada, now possessing instrumental equipment suitable for airborne all-component magnetic surveys give immediate consideration to assigning equipment for world surveys.

the United Kingdom and the USA, who have published magnetic charts of the world, to designate areas having the greatest need of prompt coverage for the guidance of all who may be in a position to conduct survey operations.

all countries participating in the world magnetic survey exchange and publish promptly the data derived from their operations.

Resolution N° 17

The International Union of Geodesy and Geophysics

RECOMMENDS that the Federation of Permanent Services (FAGGS) create a Permanent Service on Variations of Mean Sea Level.

Resolution N° 18

The International Union of Geodesy and Geophysics

CONSIDERING the lack of adequate quantitative data on chemical substances dissolved in water from the land surfaces on the world, and that such data are becoming increasingly important in total water budget and quantitative geochemical studies.

RECOMMENDS, on the basis of preliminary study, that about 65 large rivers of the world, each having an average discharge exceeding 20,000 cubic feet per second (566 cubic meters per second) be selected for sampling for chemical analysis. Runoff from these streams comprises up to 75 percent of the total runoff to the oceans from land surfaces, therefore values obtained from sampling the streams above tide water, approximately four times over a range of discharge during one year, will provide valuable quantitative information on concentrations of major and minor elements and total runoff of dissolved solids to the ocean.

It is hoped that sampling on some streams will commence in 1958, and that in some instances it may be practicable to extend the sampling program beyond one year in order to increase the number of observations.

Resolution N° 19

The International Union of Geodesy and Geophysics

RECOMMENDS that all National Committees or other appropriate bodies of countries having active volcanoes deliver as soon as possible preliminary reports on volcanic events happening in their countries to the Secretary of the International Association of Volcanology.

Resolution N° 20

The International Union of Geodesy and Geophysics

RECOMMENDS the collection and study of volcanic gases by spectral-analytical methods on active volcanoes, the devising of means to collect magmatic gases on active volcanoes, and the thorough study of these gases, including their isotopic composition and content of trace elements.

Resolution N° 21

The International Union of Geodesy and Geophysics

RECOMMENDS that attempts be made to obtain collections of rocks, and also gases from volcanoes not yet well studied. These samples should be related to the structure and stratigraphy of the Volcano.

RECOMMENDS also the assembling of a collection of good chemical analysis of fresh magmatic rocks.

Resolution N° 22

The International Union of Geodesy and Geophysics

RECOMMENDS that additional studies be made to elucidate the structural and chemical relations existing between volcanoes and plutons.

Resolution N° 23

The International Union of Geodesy and Geophysics

RECOMMENDS the collection and analysis, both chemical and isotopic, of gases from active volcanoes, and

RECOMMENDS the study of equilibrium relations including the distribution of trace elements between the liquid, solid and gaseous phases of magmas, and their bearing on the nature of volcanic activity.

RESOLUTIONS ADOPTED BY THE ASSOCIATIONS

INTERNATIONAL ASSOCIATION OF GEODESY

Resolution N° 24

The International Association of Geodesy

CONSIDERING that an improved readjustment of the European triangulation is getting on and

CONSIDERING that special mathematics studies and tests should be completed before the actual readjustment is made,

RECOMMENDS that the geodetic agencies of France, Luxembourg, Belgium, the Netherlands, Germany and Denmark furnish data to the Central Bureau for an international block of triangulation points to be used in these studies.

Resolution N° 25

The International Association of Geodesy

CONSIDERING that the first phase of the readjustment of the European