Resolutions of the Union and of the Associations

RESOLUTIONS OF THE UNION

Resolution N°1

The XVI General Assembly of IUGG

Having considered Resolution 8 of the XV General Assembly of ICSU concerning the right to free movement of scientists to attend meetings arranged by International Scientific Unions and other ICSU bodies,

Adopts the principles that were set out in Resolution 8 of the XV General Assembly of ICSU, instructs all officers of the IUGG and its constituent Associations to apply all the ICSU guidelines when arranging meetings, and instructs the Secretary General of the IUGG to report to the Committee on the Free Circulation of Scientists of ICSU when it has not been possible to follow the ICSU guidelines.

Resolution N°2

The International Union of Geodesy and Geophysics

Recognizing the importance of the use of a generally accepted value of the speed of electromagnetic radiation in vacuo in the reduction of many geodetic and geophysical observations, especially those involving the measurement of distance by means of electromagnetic radiation, recognizing also that the value of the speed of the electromagnetic radiation in vacuo adopted by the Union at its XI General Assembly, namely 299792.5 ± 0,4 km/s, no longer adequately represents the results of the most recent determinations, and

Considering

a) that the Consultative Committee for the Definition of the Metre of the *International Committee for Weights and Measures* proposed, at its meeting in 1973, that the best determinations of the speed of electro-magnetic radiation in vacuo were represented by the value of 299792458 metres per second with which an uncertainty of ± 4 parts in 10^9 was to be associated,
b) that the International Astronomical Union at its General Assembly in 1973 recommended that the value of 299792458 metres per second should be used when the most precise value of the speed of propagation of electromagnetic radiation in vacuo is required, that the value should be incorporated in the next revision of the IALL system of fundamental constants and that the International Committee of Weights and Measures should maintain that value in any redefinition of the Metre,
c) that CODATA has included this value, together with the uncertainty stated above, in its System of Fundamental Physical Constants of 1973,
d) that a recent independent determination of the speed of propagation of electromagnetic radiation in vacuo (at the National Physical Laboratory, Teddington) has confirmed the foregoing recommended value within its associated uncertainty, and
e) that the XV General Conference of Weights and Measures meeting in Paris in June 1975 has recommended the use of the value of 299792458 metres per second for the speed of propagation of electromagnetic radiation in vacuo.

Recommends that the value of the speed of propagation of electromagnetic radiation in vacuo to be used whenever the most precise value is needed in Geodesy or Geophysics should be 299792458 metres per second and that an estimated standard deviation of 12 metres per second should be associated with it.

Resolution N°3

The International Union of Geodesy and Geophysics

Considering the present situation of the International Polar Motion Service, and in order to assure the best agreement between the different methods for the determination of the polar motion,

Recommends strongly that

1) the zenith telescope of the Carloforte station should be maintained in its present site,
2) Doppler satellite tracking equipment be installed at each station of the International Latitude Service as a matter of urgency.

Resolution N°4

The International Union of Geodesy and Geophysics

Recognizing the expected importance of improved polar motion measurements for verifying models of crustal displacements during great earthquakes, including the determination of possible contributions to the total seismic moments from low-frequency aseismic motions accompanying such earthquakes,

Recognizing the importance of understanding other aspects of polar motion, for example the diurnal component, which are associated with sources of excitation other than earthquakes, the damping mechanism for the Chandler wobble, and the secular motion of the pole, and

Recognizing that international programs for making such polar motion measurements in less than a day with an accuracy of 3 to 10 centimetres may be achievable before the end of the International Geodynamics Project,

Recommends that such programs be instituted if feasible, and that they be coordinated with other related activities of the IPMS and the BIH.

Resolution N°5

The International Union of Geodesy and Geophysics

Considering

a) that it is desirable to make changes in the membership of IUCRM at well defined dates;
b) that the conditions for convening meetings of IUCRM require clarification;
c) the relevant decision of the URSI Council in Lima (1975);

Recommends that the following articles of the IUCRM Constitution be amended to read:

1.1. *The membership of the Commission shall consist of twelve members, six being nominated by IUGG and six by URSI. Each Union appoints its representatives for a period of six years, but replaces half of them at intervals of three years. The nominations shall be made in sufficient time to become effective at the end of every URSI General Assembly;*

1.2. *The President and Secretary of the Commission shall be elected by the members for a term of three years, provided that both of them are not representatives of the same Union. The election shall be held within a period of three months after the end of each URSI General Assembly. The officers are eligible for immediate re-election but normally may not serve more than two consecutive terms.*

1.3. *The Commission shall meet at least once in each term and, whenever possible, in association with a General Assembly of either URSI or IUGG by agreement, between these two unions. In addition, the Commission shall be allowed to meet at any time if and when matters relevant to the Commission make it necessary.*

The Commission is encouraged to organize symposia at other times subject to the approval of the financial arrangements by the Parent Union.

Resolution N°6

The International Union of Geodesy and Geophysics

Considering

a) that radio-oceanography is a new and growing field of research which involves radio science;
b) that it has already made a substantial contribution to physical oceanography;
c) the action taken by the URSI Council in Lima (1975);

Recommends

1) that appropriate changes be made in the constitution and membership of IUCRM so that it can include radio-oceanography in its terms of reference, at least until the URSI General Assembly in 1978,
2) that the aims of the Commission be to further the study of those aspects of meteorology and oceanography which affect the propagation of electromagnetic waves in the atmosphere and over the surface of the Earth and through planetary atmospheres ;
3) that consideration be given by URSI and IUGG to the formation of an Inter-Union Commission on Radio-Oceanography when the field of radio-oceanography has obtained broader international recognition.

Resolution N°7

The International Union of Geodesy and Geophysics

Recognizing that the International Commission for Snow and Ice (ICSI) of the International Association of Hydrological Sciences, acting as a Working Group on Snow and Ice for the IHD Coordinating Council, has successfully initiated, promoted and supported the implementation of inventories of perennial snow and ice masses in many parts of the globe, and

Emphasizing the importance of this work

a) for monitoring climatic change, and
b) for the world water balance,

Recalling that ICSI in 1974 established a Temporary Technical Secretariat

a) to coordinate and expedite the completion of national inventories
b) to collect and standardize all this information
c) to make it computer-compatible in one system
d) to produce a global summary of the data, and
e) to analyse this information,

Recommends that Member Countries, through their National Committees, cooperate with the Temporary Technical Secretariat for the World Inventory of Perennial Snow and Ice Masses, and assist ICSI in obtaining financial support, and

Invites the relevant international organisations (ICSU, UNEP, UNESCO, WMO) to participate in this cooperation and assistance.

Resolution N°8

The International Union of Geodesy and Geophysics

Invites the International Association of Hydrogeologists, the Commission of the Geological Map of the World and UNESCO to collaborate in coordinating and simplifying legends for international hydrogeological and hydrological maps, and in extending the adoption of internationally agreed legends to national hydrological maps, particularly in developing countries.

Resolution N°9

The International Union of Geodesy and Geophysics

Having in mind the importance of mitigating volcanic disasters,

Recommends that a Center for Volconological Research be established in the Pacific area to serve as training ground for volcanologists undertaking research on prediction and surveillance of volcanic eruptions.

Resolution N°10

The International Union of Geodesy and Geophysics

Noting the generally increasing use of the Système International des Unités (SI) by scientists of all disciplines and

Noting that many Unions of ICSU have recommended the adoption of SI units for their purposes,

Recommends that SI units be used in geodesy and geophysics and

Instructs the officers of the Union, its Associations and other bodies to encourage the use of SI units in all publications of the Union.

Resolution N°11

The International Union of Geodesy and Geophysics

Recognizes the support provided by various national governments for the World Data Centers for their necessary services to the scientific community and

Urges these governments to continue this support.

Resolution N°12

The International Union of Geodesy and Geophysics

Recognizing that available surface data are not sufficient for the accurate definition of the main geomagnetic field, and

Noting that no satellite measurements useful for this purpose have been made since early 1971, and that none is definitively planned for the future,

Urges that world magnetic surveys by low-altitudes satellite be conducted.
Recommends, because of uncertainties in field models derived from scalar data alone, that future surveys measure the field components with the appropriate accuracy, and furthermore, because of the critical importance of the secular variation in the definition of the main geomagnetic field,
Urges the prompt release of the data through the World Data Centers to the scientific community.

Resolution N°13

The International Union of Geodesy and Geophysics
Noting the need for a comprehensive program of study of the middle atmosphere, essentially the stratosphere and mesosphere with the lower ionosphere, and recognizing that the present programs of GARP and IMS are not intended to provide such a study,
Endorses the concept of the Middle Atmosphere Program (MAP, formerly SESAME, Structure and Energetics of the Stratosphere and Mesosphere) as an interdisciplinary program, at present under SCOSTEP, with global scope and the requirement of international cooperation, to which IAMAP and IAGA expect to make a substantial scientific contribution.

Resolution N°14

The International Union of Geodesy and Geophysics
Noting the extreme importance of knowledge of the solar constant and the spectrum of solar irradiance for evaluating the Earth's radiation budget and understanding the Earth's climate and its changes,
Recommends strongly that high priority be given to efforts to determine the solar constant with an absolute accuracy of at least ± 0.5 percent and to determine possible variations with a precision of at least ± 0.3 percent, and that the spectral irradiance be determined with the accuracy that is possible with presently available calibration standards.

Resolution N°15

The International Union of Geodesy and Geophysics
Considering the present worldwide concern that human activities may be producing important changes in stratospheric composition and that these in turn may lead to a serious deterioration of human environment throughout the world, and noting with satisfaction that the expansion of atmospheric research in the last few years has vastly increased understanding of the natural stratosphere and improved man's capability of estimating the likely effect of perturbations;
Recommends:

(a) that all nations
    (1) perform their own evaluations of possible global effects that may arise from any activities which could affect the stratosphere;
    (2) institute or expand long term continuing research programs designed to increase knowledge of processes affecting the upper atmosphere with special emphasis on the stratosphere and possible effects of any stratospheric pollution;
    (3) cooperate fully in international monitoring and other activities organised to determine any long term trends in the stratosphere in so far as they may affect environmental quality.
(b) that appropriate intergovernmental organizations, particularly WMO, provide encouragement, support and co-ordination to the above-mentioned endeavours.

Resolution N°16

The International Union of Geodesy and Geophysics
Noting the resolutions of IAPSO and of the UNESCO/IAPSO/SCOR/ICES *Joint Panel of Experts on Oceanographic Tables and Standards*,
Endorses the recommendation put forward in 1974 by IUPAC, in favour of an international programme of new determinations of the absolute density of water between 0° and 40°C with an accuracy at least equal to 1×10^{-3} kg m^{-3}, and recommends, meanwhile, the exclusive use of the table of the absolute density of SMOW between 0° and 40°C proposed by IUPAC, for the determinations of the absolute density with reference to pure water.

Resolution N°17

The International Union of Geodesy and Geophysics

Recognises the support provided by the Commission on Geophysics of the Pan American Institute of Geography and History in a program of calibrating against international standards the instruments of the magnetic observatories in Mexico, Colombia, Peru, Bolivia, Chile and Brazil, and expresses its thanks for the funds provided and the generous cooperation of the institutions and scientists involved.

Resolution N°18

The International Union of Geodesy and Geophysics

Extends its sincere thanks to the *Institut Géographique* National for making available the facilities for the Union Publication Office for so many years.

Resolution N°19

The International Union of Geodesy and Geophysics

Extends its gratitude to Ingénieur Général G. Laclavère for his most effective direction of the Publications Office of the Union.

Resolution N°20

The Council of the International Union of Geodesy and Geophysics and the participants in the 16th General Assembly of the Union extend their warmest thanks to the Government of France for the arrangements made to hold the General Assembly in Grenoble and to all who have welcomed them so warmly and who have contributed to the success of the Assembly. Their thanks are addressed especially to the French Academy of Sciences, to the President and the members of the Organizing Committee, to the City of Grenoble, to the Universities and to the Institut National Polytechnique of Grenoble.