Bulletin nº 187 Juin 1973

U. R. S. I.

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XVIII GENERAL ASSEMBLY OF URSI 1975

In accordance with Resolutions C.13 and C.14 (Warsaw 1972), Member Committees of URSI were asked to express their preference, by postal vote, for the invitations received from the Committees in Israel, Peru and Sweden.

Voting papers were returned by 27 Committees and one other Committee expressed its wish to abstain from voting. The result of the vote is as follows :

In favour of :	*Votes*
Israel	3
Peru	59
Sweden	11

After the formal closure of voting on 15 May, voting papers were received from 4 other Committees. The 11 additional votes were in favour of Peru.

INDIVIDUAL MEMBERSHIP OF URSI

NOTE BY SECRETARY GENERAL

The document reproduced below was sent to all Member Committees on 13 May 1973 (URSI-M303/304). The comments and opinions of the Committees, and of various individuals to whom the document was addressed, will be summarised in a report which is to be prepared before the end of 1973. The Board of Officers will give further consideration to the subject at its meeting in March 1974.

1. — INTRODUCTION.

During the Meetings of the URSI Council in Warsaw, there was some discussion of the advantages of admitting individual members to URSI in addition to the present Member Committees. It was noted that Commission V was particularly in favour of such a step, since it was believed that the existence of individual members, as in IAU, would result in a greater personal interest and involvement of scientists in the activities of the Union.

The Board of Officers was authorised by the Assembly to examine the internal structure of URSI, including the admission of individual members, and to recommend modifications designed to stimulate the scientific activities of the Union. At its meeting, in March 1973, the Board gave further consideration to the question of individual membership of URSI and to the necessary distinction between the responsibilities and privileges of the two membership categories : Member Committees and Individual Members. It was agreed to ask the Secretary General to examine the Statutes of IAU in order to see whether the practice at present in use in this Union could be applied to URSI.

It would clearly be premature to suggest revisions to the text of the URSI Statutes since there has, so far, been no opportunity for Member Committees to express their opinions on the principle, or to consider the implications of the admission of individual members. The purpose of the present document is to summarise the main features of the procedure for electing individuals as members of the IAU, and the resulting changes in the structure of the General Assembly and the activities of the Commissions of URSI.

The following paragraph contains some comments on the possible changes in URSI, while the Annex summarises those articles in the Statutes of IAU which have some bearing on individual members.

2. — COMMENTS.

1. It is important to note that the two classes of members (Member Committees and Individual Members) would have different rights and responsibilities. These would be reflected in the business of the General Assembly where :

(*a*) for administrative and financial questions, only the Member Committees would have voting rights (in Council Meetings);

(*b*) for purely scientific questions, not involving the finances of the Union, all the Individual Members present at a Plenary Meeting would have voting rights.

2. The Commissions would be composed of Individual Members proposed by the Chairmen and Vice-Chairmen of the Commissions. There would be no representatives of Member Committees (Official Members).

3. The range of topics covered by an IAU Commission (of which there are 39) is narrower than for an URSI Commission (of which there are 8). If the range of topics of the URSI Commissions were narrow, it would be possible for a member to take a more personal and active interest in

the field covered by his Commission. This personal aspect would be emphasised by the fact that the members are selected, by the Chairman and Vice-Chairman, in view of their ability and their wish to contribute to the work of the Commission. The existence of a larger number of more specialised Commissions would result in an increase in the number of scientists having a personal rôle to play in the activities of the Union.

ANNEX

Summary of Provisions in the IAU Statutes which relate to Individual Members

The following table lists the organs of IAU and the equivalent, if any, in URSI.

IAU	*URSI*
Adhering country	Member Committee
Individual member	—
Executive Committee (9 members with voting rights plus 2 consultants)	Board of Officers (7 members)
Representatives of adhering countries voting on administrative and financial questions (1 per country)	Council
Nominating Committee for advising on election of Individual Members, consisting of representatives of adhering countries (1 per country).	—

1. — Members of the Union.

The Union is composed of :

(*a*) Corporate Members (Adhering Countries).
(*b*) Individual Members (Members).

2. — Adherence of Countries.

The adherence of a country is approved by the General Assembly on the proposal of the Executive Committee.

3. — ADMISSION OF INDIVIDUAL MEMBERS.

3.1. Individuals proposed for membership of IAU should be scientists whose activities are closely linked with astronomy. For each candidate consideration is given to :

(*a*) the standard of his scientific achievements;

(*b*) the extent to which his scientific activities involve research in astronomy;

(*c*) his desire to assist in the achievement of the aims of the Union.

3.2. Young scientists are eligible if they have demonstrated their ability to conduct original research (Ph. D. or equivalent qualification) and have had several years experience of successful research.

3.3. The following procedure is adopted for the election of Individual Members :

(*a*) Countries and Chairmen of Commissions are invited to propose scientists for election as Individual Members. The Secretary General must receive proposals not later than five months before a General Assembly.

(*b*) The names of the candidates are examined by the Nominating Committee during the Assembly and this Committee expresses its opinion on the proposals. The Executive Committee is responsible for making the final decisions taking into account the comments made by the Nominating Committee.

4. — GENERAL ASSEMBLY.

4.1. All motions and proposals concerning the administration or the finances of the Union, and intended for inclusion in the Agenda, must be received by the Secretary General not later than five months before the General Assembly. Countries and Commissions of the Union are entitled to submit proposals.

4.2. At the Assembly, the voting procedure is as follows :

(*a*) on questions involving the budget, each country is entitled to a number of votes related to its Category of Membership;

(*b*) on administrative questions not involving the budget, each country has one vote;

(*c*) on scientific questions not involving the budget, each Individual Member of the Union has one vote.

5. — COMMISSIONS OF THE UNION.

5.1. The General Assembly forms Commissions which pursue the scientific objectives of the Union through activities such as the study of particular branches of astronomy, the encouragement of cooperative investigations and the discussion of questions relating to international agreements or standardisation. Each Commission prepares a report on its work for submission to the General Assembly.

5.2. The Chairmen and Vice-Chairmen of Commissions are elected by the General Assembly on the proposal of the Executive Committee. The Chairman and Vice-Chairman of a Commission together designate Individual Members of the Union as members of their Commission subject to confirmation by the Executive Committee. They are encouraged to remove members who have not contributed to the work of the Commission.

5.3. An Individual Member may not be a member of more than three Commissions.

5.4. A Commission may suggest the names of non-members of the Union for election so as to enable them to become members of the Commission.

5.5. At meetings of Commissions every member of the Commission has one vote.

6. — PUBLICATIONS.

Members of the Union are entitled to receive copies of the publications of the Union free of charge or at reduced cost, at the discretion of the Executive Committee which must take into account the financial situation of the Union.

PRESENTATION OF URSI FLAG

During the XVII General Assembly of URSI, held in Warsaw in August 1972, the President of the Polish National Committee of URSI confirmed that his Committee wished to present a flag to the Union to commemorate the Warsaw Assembly.

Arrangements were made with the Polish Embassy in Brussels for the handing over of the flag during a brief ceremony at the URSI Secretariat on 27 April 1973. Those present were :

His Excellency the Polish Ambassador, Mr. S. Kociołek;
Messrs M. Stefański and Z. Chrupek, Attachés at the Polish Embassy;
Prof. Ch. Manneback, Honorary President of URSI;
Prof. R. Coutrez, President of the Belgian URSI Committee;
Dr. C. M. Minnis, Secretary General of URSI;
Mlle Y. Bogitch, Administrative Secretary.

The Secretary General welcomed those present and pointed out that, although Brussels had been the seat of the URSI Secretariat since 1918 and also of the preceding International Commission created in 1913, the activities of the Union extended to all parts of the world. The international character of URSI was reflected in the world-wide distribution of the 36 Member Committees created by the Academies of Science in Europe, North and South America, Africa, Asia and Australasia. Moreover, the General Assemblies of the Union had been held not only in Europe but also in the North American continent, in Australia and in Japan.

The Secretary General recalled that the Australian Committee had presented a flag to the Union during the Assembly held in Sydney in 1952; this dark blue flag, with its gold lettering, was familiar to participants at all the Assemblies since then and it had been displayed in the Congress Hall of the Palace of Culture and Sciences in Warsaw in 1972.

In conclusion the Secretary General said he was sure that the Polish flag would always recall the Warsaw Assembly and the warm welcome extended to the delegates by the Polish Committee, and by Prof. Groszkowski who had been a Vice-President of the Union from 1966 to 1972.

His Excellency then handed over the flag to Prof. Manneback; he expressed the hope that it would meet with the approval of the Union and that it would be a symbol of the international cooperation of scientists in the field of radio science.

Prof. Manneback accepted the flag and expressed the gratitude of the Union for the gift. He referred to his association with URSI and its General Assemblies over a period of 40 years. He was very glad to have been present at the Assembly in Warsaw and he was sure that the flag would be a most acceptable memento of that occasion.

The flag has a white background and the lettering on both sides is in red. One side bears the initials « URSI » inside the familiar lozenge, while the other bears the inscription « WARSZAWA 1972 ».

After the conclusion of the ceremony, the Secretary General proposed a toast to the President and Members of the Polish National Committee of URSI and this was drunk, most appropriately, in Zubrówka.

* * *

Dr. C. M. Minnis,
Secretary General of URSI.
7, Place Emile Danco.
1180 Brussels, Belgium.

Ref. 1-40/73
19 February 1973

Dear Dr. Minnis,

The Polish National Committee of the International Union of Radio Science has the honour and pleasure to present the URSI flag to the Union.

This flag has been founded to commemorate the XVIIth General Assembly of URSI which took place in Warsaw.

Hoping the flag will meet with the acceptance of the Union, we believe that it will be a symbol of the international cooperation of scientists in the field of radio science.

Yours sincerely,

Prof. Dr. A. Smoliński,
President of the Polish National Committee of URSI.

Professor A. Smoliński,
President, Polish URSI Committee,
Instytut Radioelektroniki,
Nowowiejska 15/19,
Warsaw, Poland.

27 April 1973.

Dear Professor Smoliński,

It was with great pleasure that I received your Ambassador at the URSI Secretariat this morning and also your letter which accompanied the flag presented to URSI by the Polish National Committee.

On behalf of the URSI Board of Officers, may I offer you and your members our very warm thanks for this most acceptable gift. As you will see from the attached report on the brief ceremony, the flag wasac cepted, on behalf of the Union, by Prof. Manneback. It will, I am sure, be a pleasant reminder of our Assembly in Warsaw last year and, in a wider sense, of the valuable contacts made by radio scientists from many parts of the world on that occasion.

Yours sincerely,

C. M. Minnis,
Secretary General.

CENTENARY OF IMO/WMO

The Centenary of the foundation of the International Meteorological Organisation will be celebrated in Vienna, where the IMO was established in 1873, and in Geneva where the Headquarters of the World Meteorological Organisation has been for many years.

The Secretary General of WMO has invited URSI to be represented at the events and our representatives will be :

in Vienna : Prof. Dr. F. Steinhauser (Past President, URSI National Committee in Austria),

in Geneva : Dr. H. Wehrlin (Secretary, URSI National Committee in Switzerland).

The following letter has been sent to the Secretary General of WMO on behalf of URSI.

Dear Dr. Davies,

It gives me much pleasure to inform you that, at its meeting on 29-30 March, the Board of Officers of URSI resolved that a message of greetings and congratulations be transmitted to the World Meteorological Organization on the occasion of the Centenary of the foundation of the International Meteorological Organization.

Even though the scientists concerned with research on the propagation of electromagnetic radiation are not obliged to study meteorology, many of them have found it necessary to take an interest in various aspects of the structure and the physics of the atmosphere.

Ever since the origins of URSI in 1913, radio scientists have been unable to avoid investigating the nature of thunderstorms as sources of radio noise. These studies and the development of radio techniques for the location of thunderstorms have long been a subject of common interest to both meteorologists and radio scientists.

Investigations of the propagation of radio waves through the lower atmosphere have become increasingly important with the advent of microwave communication links and, more recently, with the development of satellite communication systems. However, these investigations have also been of direct benefit to the meteorologists since they have led to the development of radio techniques for the study of the fine structure of the atmosphere.

Although the ionosphere lies above the levels of the atmosphere that are of primary interest to the meteorologists, nevertheless it plays an important rôle in the rapid transmission of meteorological data to forecasting centres. Further research on the coupling between the ionosphere and the lower atmosphere may make it necessary for the meteorologists to extend their field of interest to the ionized regions of the atmosphere.

We are confident that the numerous links between meteorologists and radio scientists, as well as those between WMO and URSI, will continue to be as fruitful as they have been in the past.

Yours sincerely,

20 April 1973.

C. M. Minnis,
Secretary General.

URSI-STP COMMITTEE

The 4th Meeting of the URSI-STP Committee was held in Warsaw on 23 August 1972. The members present were W. J. G. Beynon (Chairman), K. Bibl, G. M. Brown (Secretary), S. A. Bowhill, D. Carpenter, W. Dieminger, J. W. King, E. A. Lauter, G. M. Pillet, K. Rawer, A. Spizzichino, K. Sprenger, J. Taubenheim, J. W. Wright. In addition, 33 delegates to the General Assembly of URSI attended by invitation.

The Minutes have been circulated to the members of the Committee by the Secretary. The principal points discussed and decisions reached are summarised below.

1. — IONOSPHERIC NETWORK ADVISORY GROUP.

Mr. Piggott (Chairman, INAG) stated that the present distribution of the INAG Bulletin was 320 copies and that it appeared at intervals of about three months. It appeared to meet a real need.

He pointed out that many stations found that it was too expensive to produce ionograms of the standard required for high-quality data.

2. — IONOSPHERIC DRIFTS.

It was noted that Resolution III.9 (Warsaw 1972) of URSI referred to the problems of drift measurements.

3. — WHISTLERS.

The Working Group on Whistlers (Chairman, Dr. Carpenter) expected to be concerned mainly with the problems of flow in the magnetosphere. Work is in progress on the links between whistler and ionospheric data arising from ionosphere-magnetosphere coupling.

4. — DIGITAL DATA PRE-PROCESSING.

Dr. Bibl (Chairman of the Working Group) referred to the wider applications of the work done on ionospheric data handling. (See Resolution III.19 (Warsaw 1972)).

5. — GUIDES TO DATA EXCHANGE.

A revised version of the Guide relating to data in the field of solar-terrestrial physics is expected to be issued in 1973 by IUCSTP.

6. — HANDBOOK OF IONOGRAM INTERPRETATION AND REDUCTION.

The revised English version is to be published early in 1973. It was recommended that French, Russian and Spanish editions be prepared. (See Resolution III.4 (Warsaw 1972)).

7. — MANUAL ON ABSORPTION MEASUREMENTS.

Prof. Rawer reported delays in the preparation of the text and hoped that publication would be possible by the end of 1972.

8. — INTERNATIONAL REFERENCE IONOSPHERE.

Prof. Rawer referred to the preliminary report dated August 1972,

but stated that it was only tentative and that certain points were still under investigation.

9. — Retrospective World Interval.

A recommendation was made for the designation of an RWI to cover the period 26 July-14 August 1972. (See Resolution III.5 (Warsaw 1972)).

10. — IUCSTP.

Prof. Bowhill summarised the programmes planned by the Commission in March 1972. The main programme will be the International Magnetospheric Study but there will also be studies relating to the build-up of solar flares, terrestrial and planetary atmospheres, etc. A small group consisting of Profs. Bowhill, Rawer, Lauter, Kazimirovsky and Evans was formed to discuss other programmes suggested by IUCSTP.

Mr. Piggott and Dr. King were designated to represent URSI interests in the IUCSTP Working Group on Solar-Terrestrial Monitoring and the IMS Steering Group respectively.

11. — Future of URSI-STP Committee.

The Chairman stated that the majority of the members agreed that it would be logical to transfer the main activities of the Committee to Commissions III and VIII. Prof. Rawer agreed that the Commissions should be more active between Assemblies and stated that Commission III intended to create several Working Groups to deal with specific topics. With such a structure, most of the work of the URSI-STP Committee could be taken over by Commissions III and VIII.

Commissions III, IV and VIII later recommended that the sole function of the URSI-STP Committee in future should be to act as a link between URSI and IUCSTP. The membership will be the Chairmen of URSI Commissions III, IV and VIII with, as Chairman, the URSI representative on the Bureau of IUCSTP. (See Resolution III/IV/VIII.1 (Warsaw 1972)).

TOTAL ECLIPSE OF THE SUN : 30 JUNE 1973

In April 1973, *Solar Eclipse Bulletin* No. 4 was issued by the US Coordinator's Office in Washington. It contains further information about the programmes of special observations being undertaken by numerous

expeditions in West, Central and East Africa. These refer not only to observations of the solar atmosphere, but also to aeronomic, ionospheric and geomagnetic measurements, variations in radio frequency noise levels, and a search for objects in orbits inside that of Mercury.

The Bulletin also contains preliminary results of investigations made during the July 1972 eclipse and the ephemeris for the total eclipse of 20 June 1974. Bulletin No. 5 will include the results of site surveys for this eclipse, the track of which will touch the extreme south-west tip of Australia (south of Fremantle) after crossing the southern Indian Ocean and Ile Amsterdam (France).

Bulletin No. 5 will be published in December 1973 and investigators are invited to send preliminary results for the June 1973 eclipse as soon as possible to :

Mr. Ronald R. La Count,
National Science Foundation,
1800 G Street N. W.,
Washington D. C. 20550, USA

BEACON SATELLITES

A satellite carrying a beacon transmitter radiating at four coherent frequencies will be launched in the first half of 1974 as part of the INTER-KOSMOS programme. The frequencies used will be 20.004 MHz (unmodulated), and 40.008, 180.036 and 360.072 MHz (all modulated). On each frequency the output power will be 300-400 mW and the radiation will be linearly polarised.

Persons wishing to cooperate in the reception of the beacon signals are invited to ask for further information from

Ionospheric Observatory,
Geophysical Institute, Czechoslovak Academy of Sciences,
Panska Ves,
47141 Duba, Czechoslovakia.
(Telex No. 17382 IONV C).

FINE STRUCTURE OF PRECIPITATION AND EM PROPAGATION

The Inter-Union Commission on Radio Meteorology (URSI/IUGG) is organising an international colloquium on the fine structure of precipitation

and its effects on electromagnetic radiation. The colloquium will be held at Nice (France) from 23-31 October 1973.

It is intended to examine recent progress in the study of the relations between meteorological phenomena and the propagation of electromagnetic radiation in the atmosphere, and the consequences for telecommunications. The following topics will be covered :

1. Propagation of radio waves : theory and observations.
2. Structure of precipitation as observed by radar methods.
3. Aspects of the physics and dynamics of clouds that are of interest to specialists in telecommunications.
4. Statistical studies of precipitation.
5. Statistical studies of attenuation.

Attendance will be limited to about 50 participants. Intending authors are asked to send summaries of their papers to

Mr. K. R. Hardy,
Meteorology Laboratory,
AFCRL,
Bedford, Mass. 01730,
USA.

or

M. I. Revah,
Département RSR,
CNET,
3 avenue de la République,
F — 92131 Issy-les-Moulineaux, France.

ATMOSPHERIC ELECTRICITY

V International Conference, Garmisch-Partenkirchen
2-7 September 1974

The above Conference is sponsored by the International Commission on Atmospheric Electricity of IUGG (IAMAP). The Executive Panel has recently circulated an outline of the programme which includes sessions on the following topics :

1. Cloud physics, non-convective clouds and precipitations.
2. Thunderstorms and showers.

3. Physics of lightning.
4. Atmosphere-space coupling; solar-terrestrial relations.
5. Global circuit and the Ten-Year Programme.
6. Ions : basic research.
7. Ions : applied research; atmospheric electricity and meteorology.
8. Other celestial bodies, other atmospheres, influence of the Moon.
9. Principles and problems of instrumentation; methods of calibration (excluding details of circuits); data handling.

Intending participants are requested to send three copies of summaries of their papers *not later than 15 September 1973* to

Conference Office,
Physikalisch-Bioklimatische Forschungsstelle,
D — 8100 Garmisch-Partenkirschen, Fed. Rep. of Germany.

Summaries should not exceed two pages of double-spaced typescript and should refer to :

(*a*) the problem to be treated,

(*b*) its significance, importance or urgency,

(*c*) methods applied,

(*d*) results, or expected results,

(*e*) discussion of the significance of the results in a broader context.

Summaries should not yet contain figures or references. Authors must adhere strictly to the International System of Units.

MEMBER COMMITTEES OF URSI ; URSI COMMISSIONS

Since the publication of the complete lists in *Information Bulletin* No. 185, notification has been received of the changes and corrections listed below.

It would be appreciated if notification of further modifications could be sent to the Secretary General before mid-November 1973 for inclusion in the December issue of the Bulletin. A full list, including all revisions, will appear in the June 1974 issue.

The following entries replace the corresponding ones in Bulletin No. 185.

PRESIDENTS AND SECRETARIES OF URSI MEMBER COMMITTEES

GERMANY, F. R. :

President : Dr. W. Becker, Max-Planck-Institut für Aeronomie, D-3411 Lindau/Harz.

FINLAND :

Secretary : Dipl. Eng. Y. Sirkeinen, Helsinki University of Technology, SF-02150 Otaniemi.

POLAND :

President : Prof. Dr. A. Smoliński, Instytut Podstaw Elektroniki, Politechnika Warszawska, ul. Nowowiejska 15/19, 00-661 Warszawa.

Secretary : Prof. S. Hahn, Instytut Radioelektroniki, Politechnika Warszawska, ul. Nowowiejska 15/19, 00-661 Warszawa.

SWITZERLAND :

Secretary : Dr. H. Wehrlin, Auweg 9, CH-3074 Muri/Bern.

UNITED KINGDOM :

President : Prof. F. G. Smith, Nuffield Radio Astronomy Laboratories, Jodrell Bank, Macclesfield, Cheshire SK11 9DL.

USSR :

Secretary : Dr. M. V. Persikov, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

SCIENTIFIC COMMISSIONS

COMMISSION I ON RADIO MEASUREMENTS AND STANDARDS

Polands : Prof. S. Hahn, Instytut Radioelektroniki, Politechnika Warszawska, ul. Nowowiejska 15/19, 00-661 Warszawa.

USSR : Dr. F. N. Petrosyan, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

Commission II on Radio and Non-ionized Media

Poland : Prof. Dr. L. Knoch, Instytut Radiokomunikacji, Politechnika Gdańska, ul. Majakowskiego 11/12, 80-233 Gdańsk-Wrzeszcz.

USSR : Dr. N. A. Armand, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

Commission III on the Ionosphere

Germany, F. R. : Dr. H. G. Möller, Max-Planck-Institut für Aeronomie, D-3411 Lindau/Harz.

Japan : Dr. T. Yonezawa, Radio Research Laboratories, Ministry of Posts and Telecommunications, 4-2-1, Nukui-kita-machi, Koganei-shi, Tokyo (184).

Poland : Dr. J. Molski, ul. Sady Zoliborskie 11, 01-772 Warszawa.

USSR : Prof. K. I. Gringauz, Institute of Space Research Ac. Sci., 88 Profsoyusnaya ul., Moskva V-485.

Commission IV on the Magnetosphere

Poland : Dr. A. Turski, Instytut Podstawowych Problemów PAN, ul. Świetokrzyska 21, 00-049 Warszawa.

USSR : Dr. V. I. Aksënov, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

Commission V on Radio Astronomy

Germany, F. R. : Prof. Dr. R. Wielebinski, Max-Planck-Institut für Radioastronomie, Argelanderstrasse 3, D-53 Bonn.

Norway : Dr. Øystein Elgarøy, Associate Professor, Institute of Theoretical Astrophysics, University of Oslo, P. O. Box 1029, Blindern, Oslo 3.

Poland : Prof. Dr. S. Gorgolewski, Instytut Radioastronomii, Uniwersytet Mikołaja Kopernika, ul. Sienkiewicza 30/32, 87-100 Toruń.

USSR : Prof. A. D. Kuzmin, Lebedev Physical Institute Ac. Sci., Leninskij Prospekt 53, Moskva V-312.

Commission VI on Radio Waves and Circuits

Germany, F. R. : Prof. Dr. G. Piefke, Institut für Theoretische Elektrotechnik, Technische Hochschule, Schlossgartenstrasse 2, D-61 Darmstadt.

Japan : Prof. H. Takahashi, Faculty of Science, University of Tokyo, 7-3-1, Hongo, Bunkyo-ku, Tokyo (113).

Poland : Prof. Dr. S. Bellert, Instytut Podstaw Radioelektroniki, Politechnika Warszawska, 00-665 Warszawa.

USSR : Prof. L. D. Bakhrakh, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

Prof. V. I. Siforov, Institute of Information and Transmission Problems, Ac. Sci., 8a Aviamotornaya ul., Moskva E-24.

Commission VII on Radio Electronics

Germany, F. R. : Dr-.Ing. K. Garbrecht, Siemens AG, NZL, Hofmannstrasse 51, D-8 München 25.

Japan : Prof. S. Saito, Institute of Industrial Science, University of Tokyo, 7-22-1, Roppongi, Minato-ku, Tokyo (105).

Poland : Dr. B. Mroziewicz, Instytut Technologii Elektronowej, Al. Lotników 32/46, 02-668 Warszawa.

USSR : Prof. M. E. Zhabotinskij, Institute of Radioengineering and Electronics Ac. Sci., Prospekt Marksa 18, g.Moskva, Centr, GSP-3.

Commission VIII on Radio Noise of Terrestrial Origin

Vice-Chairman : Dr. Ya. I. Likhter, IZMIRAN, Akademgorodok, Moscow Region.

Japan : Prof. H. Ishikawa, Research Institute of Atmospherics, University of Nagoya, Ichida-machi, Toyokawa-shi, Aichi-ken (442).

Poland : Dr. A. Wojnar, ul. Sady Zoliborskie 17, m.24, 01-772 Warszawa.