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ISSAC KOGA GOLD MEDAL

The URSI Committee in Japan has decided to found an Award to commemorate the late Professor Issac Koga, Honorary President of URSI. This Award will go to a Young Scientist, of age not more than 35 on 30 September of the year preceding the General Assembly of URSI. It will take the form of a Gold Medal to be presented during the General Assembly.

The Rules for the Issac Koga Gold Medal have been approved by the Board of Officers and are reproduced below.

Because of circumstances, the time-table for 1984 cannot follow the pattern set in the Rules. Therefore, nominations will have to be submitted before 1 December 1983.

RULES FOR THE AWARD OF THE ISSAC KOGA GOLD MEDAL

1. The Issac Koga Gold Medal honours the memory of a scientist who was closely associated with URSI for many years. The Award is made normally at intervals of three years, on the occasion of the General Assembly of URSI. If the interval between two General Assemblies is considerably greater or less than three years, the Board of Officers is authorized to modify the date on which the next Medal will be awarded, the period referred to in Art.2, and the dates referred to in Arts 3 and 5.

2. The Medal is awarded to a young scientist, of age not more than 35 on 30 September of the year preceding the General Assembly of URSI, who has made an outstanding contribution to any of the branches of science covered by the Commissions of URSI. No members of the URSI Board of Officers shall be eligible. The work to which the Award refers must have been carried out mainly during the six-year period ending one year before the General Assembly at which the Award is to be made. The Medal will be presented at the General Assembly.

3. The name of not more than one candidate may be submitted by each of a) the Member Committees of URSI, b) the Chairmen and Vice-Chairmen of the URSI Commissions. The names of the candidate must be received by the Secretary General of URSI not later than 30 September of the year preceding that of the URSI General Assembly.

4. The name of the candidate must be accompanied by:
- a) a general summary of the candidate's career and scientific activities;
 - b) a review of recent achievements of the candidate including references to the most important papers, published alone or jointly, during the six-year period referred to in Art.2;
 - c) an outline of the reasons for the nomination of the candidate.

5. As soon as possible after 30 September, copies of all the documents referred to in Art.4 shall be sent by the Secretary General to the Award Advisory Panel, the members of which shall be determined by the President of URSI in consultation with the Board of Officers. The Panel is authorized, when necessary, to consult non-members regarding the merits of the candidates, before submitting its own considered views to the Board of Officers not later than 31 January of the year of the General Assembly.

6. The Board of Officers has full authority to select the candidate to whom the Award will be made. In doing so it will take into account the information provided by the proposers of the candidate and also the views expressed by the Award Advisory Panel. The Board of Officers will bear in mind that it is desirable to make awards to candidates working in different branches of radio science.

7. The Board of Officers has full authority to withhold the Award if, in the opinion of the members, there is not a qualified candidate.

APPLETON PRIZE

The URSI Secretariat has been informed that the Council of the Royal Society (London) has decided to increase the value of the Appleton Prize from £100 to £250 with effect from August 1981.

URSI ACCOUNTS 1982

In accordance with the recommendation of the URSI Standing Finance Committee, the practice of publishing the accounts of the Union annually in the *URSI Information Bulletin* is being continued.

The Balance Sheet and the Income and Expenditure Accounts of URSI for the year ended 31 December 1982 are summarized below and are based on the original accounts which have been audited by Bureau Rahier, S.C., Experts Comptables, Brussels.

The assets held in Belgian francs have been converted to US dollars using the UNESCO exchange rate valid at 31 December 1982 (1 = 49 B.francs).

The ICSU Dues for the year 1982 (\$2,730.54) will be included in the accounts for 1983.

INTERNATIONAL UNION OF RADIO SCIENCE (URSI)

Balance Sheet: 31 December 1982

	US\$	US\$
<u>ASSETS</u>		
<u>Bank Balances:</u>		
<u>Dollars</u>		
First National City Bank	19,940.07	
Banque Degroof (restricted)	815.00	
Banque Degroof (free)	25,000.00	
Bank of America	<u>10,000.00</u>	
		55,755.07
<u>Belgian Francs</u>		
Banque Degroof	3,176.98	
Soc. Gén. de Banque	<u>766.76</u>	
		3,943.74
<u>Investments</u>		
Merrill Lynch R.A. Fund	87,560.80	
RORENTA Units	<u>67,482.43</u>	
		155,043.23
<u>Petty Cash and Stamps</u>		
		105.75
<u>Sundry Debtors</u>		
		<u>624.39</u>
	Total Assets	215,472.18
<u>Less Creditors</u>		
IUCAF	6,845.78	
IUWDS	4,919.63	
Vaillant-Carmanne	5,154.08	
Bureau Rahier	<u>801.43</u>	
	17,720.92	
Pension Fund	4,793.02	
Balth. van der Pol Gold Medal Fund	<u>8,704.76</u>	
		31,218.70
Net Total of URSI Assets		<u><u>\$ 184,253.48</u></u>

The net URSI Assets are represented by:

	US\$	US\$
<u>Reserve Fund</u>		
General	0	
Closure of Secretariat	<u>71,550.00</u>	71,550.00
<u>Scientific Activities Fund</u>		
Scientific Activities in 1983 (Revised Washington Budget)	69,700.00	
Special Symposium Fund	6,854.45	
XXI General Assembly (33% of Budget Allocation)	<u>21,000.00</u>	97,554.45
<u>Unallocated</u>		<u>15,149.03</u>
		<u><u>\$184,253.48</u></u>

Income and Expenditure Account for the Year
Ended 31 December 1982

<u>INCOME</u>	US\$	US\$
Contributions from Member Committees		109,221.51
Allocation from UNESCO Grant to ICSU		13,543.00
Sale of Publications		647.04
Interest and Dividends (net)		
Belgian Francs	5,270.18	
US Dollars	<u>7,770.71</u>	13,040.89
Appreciation in value of RORENTO Units		<u>9,682.45</u>
Total Income:		<u><u>\$146,134.89</u></u>

<u>EXPENDITURE</u>	US\$	US\$	US\$
<u>Scientific Activities</u>			
Meetings, Symposia, etc.			
Ionosphere and Magnetosphere	1,000.00		
Plasma Physics	1,000.00		
Ionized Gases	500.00		
Information Theory	500.00		
XX URSI Assembly, Washington	1,135.50		
WMO/CAS, Melbourne	805.31		
Board of Officers	<u>3,388.51</u>		
		8,329.32	
Printing URSI Bull.Nos 220-223		5,634.20	
Subventions			
FAGS	1,000.00		
IUCAF	<u>1,250.00</u>		
		<u>2,250.00</u>	
Total Expenditure:			
Scientific Activities			16,213.52
<u>Administration</u>			
Salaries and Pensions(incl.Soc.Sec.)		35,709.08	
Office Expenses			
Rent, light, heating	2,715.64		
Stationery, office supplies	528.56		
Office equipment	772.45		
Insurance	3,112.18		
Telephone	944.97		
Postage	622.78		
Entertainment	426.02		
Administrative Travel	7,530.96		
Bank charges	459.26		
Miscellaneous	<u>3,426.83</u>		
		<u>20,539.65</u>	
Total Expenditure:Administration			56,248.73
<u>Financial charges</u>			
Loss on sale of Belgian State Loans		3,148.57	
Loss on exchange		<u>3,682.27</u>	
			6,830.84
Total Expenditure			<u>79,293.09</u>
Excess of Income over Expenditure			66,841.80
			<u><u>\$146,134.89</u></u>

	US\$
Balance in hand on 1 January 1982	140,826.02
<u>Less</u> loss on depreciation of Belgian franc	<u>-23,414.34</u>
Revised balance on 1 January 1982	117,411.68
Excess of Income over Expenditure to 31 December 1982	<u>66,841.80</u>
Balance in hand on 31 December 1982	<u><u>\$184,253.48</u></u>

Rates of Exchange:

1 January 1982: \$1 = 37.5 B. francs
31 December 1982: \$1 = 49.0 B. francs

UTC TIME STEP
on the 1st of July 1983

A positive leap second will be introduced at the end of June 1983. The sequence of dates of the UTC second markers will be

30 June 1983,	23 ^h 59 ^m 59 ^s
30 June 1983,	23 ^h 59 ^m 60 ^s
1 July 1983,	0 ^h 0 ^m 0 ^s

The difference between UTC, and the International Atomic Time will thus be

from 1 July 1982, 0h UTC to 1 July 1983, 0h UTC: UTC-TAI=-21s

from 1 July 1983, 0h UTC: UTC-TAI=-22s

B. Guinot
Director, Bureau International
de l'Heure

BOOKS PUBLISHED BY URSI PERSONALITIES

L. BOITHIAS (Past French Official Member for Commission F of URSI)

Propagation des Ondes Radioélectriques dans l'Environnement Terrestre,

Dunod, Collection Technique et Scientifique des Télécommunications, 1983, XVIII + 310 pages.

ISBN 2-04-015476-0

WORKSHOP ON RADIO PROPAGATION IN THE TROPICS

An Autumn Course on Geomagnetism, the Ionosphere and Magnetosphere was organised by the International Centre for Theoretical Physics at Trieste from 21 September to 12 November 1982 under the overall direction of Sir Granville Beynon and with financial support from UNESCO. URSI was also a co-sponsor of the Course and gave some financial support. The concluding two weeks of the Course, 1 - 12 November 1982, were devoted to a Workshop on 'Radio Propagation in the Tropics' directed by Dr. A.P. Mitra (India), who is also the Chairman of the URSI Committee on Developing Countries. The Workshop provided an opportunity for the scientists and engineers from developing countries to gain knowledge in the area of the Earth's upper atmosphere and its rôle in the propagation of radio waves in tropical regions. About 75 people from all over the world, most of them from developing countries in Latin America, Europe, Africa, Middle East, South East Asia and Asia (including China) participated in the Workshop. Five experts on radio communications delivered lectures as faculty members. These were: Dr. A.P. Mitra (India), Dr. K. Davies (USA), Dr. B.M. Reddy (India), Dr. S. Radicella (Argentina) and Dr. N.J. McEwan (UK). The lectures on Radio Communications dealt with various aspects of the ionospheric and tropospheric environment, and on the mechanisms involved in propagation of radio waves in these media. In addition to advanced lectures on Radio Communications, the Workshop included discussions on the International Middle Atmosphere Programme, Methodology for planning reliable HF radio circuits, Satellite radio beacons, Data reduction techniques, and the Distribution of vertical ionosonde network.

A special feature of the Workshop was the homogenisation of the tropospheric and ionospheric communication aspects, which have several overlapping features. Such a treatment gives a total perspective of the tropical communications. In VHF anomalous propagation, for example, the troposphere and the ionosphere play equally important rôles. A considerable amount of reference data was provided for the American, African and Asian zones, covering both tropospheric and ionospheric characteristics. An important component of the Course was the description of a large number of simple and inexpensive techniques for probing the troposphere and the ionosphere, which are appropriate for Universities in developing countries. It is expected that the Course has gone a long way in developing

the appreciation of low latitude communication problems, and in starting various cooperative programmes between developing countries.

A.P. Mitra

TUTORIAL WORKSHOP ON BEACON TECHNIQUES AND APPLICATIONS

An International Symposium on Beacon Satellite Studies of the Earth's Environment was held at New Delhi, India, from 7-11 February 1983. This was preceded by a tutorial (training) workshop on Beacon Techniques and Applications on 3 and 4 February 1983. The primary aim of the Workshop was to disseminate knowledge on radio beacon techniques among younger scientists and engineers from developing countries. The subject areas dealt with were:

- a) Radio beacon techniques for investigating the ionised media in the Earth's environment.
- b) Propagation errors affecting modern radio systems.
- c) Instrumentation for radio beacon observations.
- d) Data handling and evaluation techniques.
- e) Modelling techniques.
- f) Scintillation analysis techniques.
- g) Travelling ionospheric disturbances.

Twelve speakers from five countries discussed these various topics before an audience of 40 trainees belonging to some 13 countries.

In addition to the Tutorial Workshop, the young scientists from developing countries attended the International Beacon Satellite Symposium. The meeting was attended by 101 delegates. About 16 invited talks, 5 special IGY lectures and 80 contributed papers were presented during the Conference. The future planning of Beacon Studies was discussed in a special Panel session. The different sessions were arranged as follows:

- Session I : 25 years of Satellite Beacon Studies
- Session II : Ionospheric Modelling
- Session III : Equatorial Scintillation Studies

Session IV : Scintillation Studies
Session V : Total Electron Content
Session VI : Electron Content Effects at Low and Mid-latitudes
Session VII : Electron content correlations and morphology
Session VIII: High latitude ionospheric effects
Session IX : The future of satellite beacon studies.

In addition to the Symposium, visits to various divisions of the National Physical Laboratory at New Delhi were arranged.

A.P. Mitra

ANNOUNCEMENTS OF MEETINGS AND SYMPOSIA

Techniques in Studies of Biological Effects of Low Level Millimeter Waves

This meeting is sponsored by URSI and organized by the URSI Commission A Working Group on Measurements related to the Interaction of electromagnetic fields with biological systems. It is co-sponsored by the Bioelectromagnetics Society, the Gesellschaft für Strahlen- und Umweltforschung and the Max-Planck-Institut für Festkörperforschung.

The meeting will be held in Herrsching am Ammersee, Fed. Rep. of Germany from 4 to 6 September 1983.

The Symposium Chairman is:

Dr. Fritz Keilmann
Max-Planck-Institut für Festkörperforschung
D-7000 Stuttgart 80, FR Germany.

Tel.: (0711) 6860/603 or 6860/651.
Telex: 7-255 555.

The Symposium will provide a discussion platform for scientists studying biological effects of low-intensity millimeter microwave radiation. Emphasis will be on experimental approaches and on experimental details. Specific goals will be:

(i) which biological systems (which biological endpoints) may be of use, and which requirements do they impose on the

microwave system, and

- (ii) which irradiation configurations may be of use, and how can the microwave fields as well as the microwave-induced temperature fields be controlled.

Researchers who are active in biological and/or millimeter wave investigations and who are interested to obtain an invitation to participate in this Symposium should immediately contact the Chairman. Invited speakers will be asked to send in a 50- to 100-word abstract to arrive before 30 June 1983. Copies of the abstracts will be mailed, together with the final programme, to all preregistered participants by mid-July.

EISCAT Workshop

Aussois, France, 5-8 September 1983

The EISCAT Scientific Advisory Committee proposed during its meeting in September 1982 to organize an EISCAT Workshop in September 1983. The purpose of the Workshop is to bring together (after two years of observations) the EISCAT staff, the EISCAT users as well as scientists interested in coordinated studies. The Workshop will include plenary sessions (with contributed and invited presentations) and working group sessions. The topics covered will deal with both scientific and technical aspects of the past and future EISCAT operation. They will also include coordinated work with satellite, rocket and ground based observations. The list of scientific topics will include middle atmosphere studies, auroral zone electrodynamics, ionospheric heating, particle precipitations, ion composition... However the scope of this first Workshop is not limited and the programme will ultimately be organized according to the wishes of the contributors.

The Chairman of the Scientific Programme Committee is Dr. P. Bauer, Chairman of URSI Commission G.

For further details, contact the Secretary:

M. Langerman CNET/RPE
3 avenue de la République
F-92131 Issy-les-Moulineaux, France.
Telephone: (1) 638 4078
Telex: 200 570 FRANCE.

4th International Conference on Reliability
and Maintainability

This Conference will be held in Perros-Guirec, France, from 21 to 25 May 1984. It is being organized by the Centre National d'Etudes des Télécommunications (CNET) in association with CNES, CEA, ESA and SEE. It is sponsored by the IEEE.

The areas to be covered are: Reliability; Maintainability; Availability safety; Quality Assurance. (Electronic and optical components and systems, professional and public).

The Chairman of the Programme Committee is

M. R. Goarin
4ème Colloque international sur
la fiabilité et la maintenabilité
Centre de Fiabilité
CNET - LAB/ICM
B.P. 40
F - 22301 Lannion Cedex, France.

7th International Wrocław Symposium on
Electromagnetic Compatibility

This Symposium will be held from 26 to 28 June 1984 in Wrocław, Poland under the auspices of the Committee of Electronics and Telecommunication of the Polish Academy of Sciences. The Chairman of the Symposium Council is Prof. W. Rotkiewicz (Poland) and the Chairman of the Scientific Programme Committee is Prof. F.L. Stumpers (Netherlands).

The programme will cover all aspects of EMC theory and practice. EMC is understood in a broad sense as the ability of a device or system to function in its electromagnetic environment without introducing or suffering intolerable disturbances.

For further information, contact

EMC Symposium
Box 2141
51-645 Wrocław 12
Poland.

Wave Breaking, Turbulent Mixing and Radio Probing
of the Ocean Surface

A Symposium on Wave Breaking, Turbulent Mixing and Radio Probing of the Ocean Surface will be held at Tohoku University, Sendai, Japan, from 19 to 25 July 1984. This Symposium will be co-sponsored by URSI.

The aims include a review and presentation of new research results in the field of dynamics and satellite measurement of the ocean surface, and the related upper ocean processes. This Symposium is intended to cover similar topics, and serve as a sequel to the IUCRM Symposium on Wave Dynamics and Radio Probing of the Ocean Surface held in Miami Beach in May 1981, but this time the emphasis is placed on the study of the upper boundary layer of the ocean in the context of its rôle in climatic changes, as one of the joint activities of the Committee on Climatic Changes of the Ocean (CCCO) and the Joint Scientific Committee (JSC) for the WCRP.

Topics to be covered include: (1) Ocean waves - their dynamics, nonlinear waves, especially wave breaking, structure of the ocean surface; (2) Radio probing of the ocean surface - microwave scatterometry, radiometry, altimetry, SAR/SLAR, 2-frequency radar, physical process pertaining to electromagnetic scattering at the sea surface; (3) Turbulent mixing in the surface layer of the ocean: physics of ocean mixed layer, response of ocean to atmospheric disturbances, upper ocean variability. These items include basic work, measurements, and application, e.g., near shore processes, climate dynamics and modelling. Two days will be devoted to each of the three topics. The proceedings of the meeting will subsequently be published by an appropriate publisher.

The Organizing Committee at Tohoku University includes Y. Toba (Chairman), G. Takeda, W. Brutsaert, H. Kamiyama, J. Kondo, H. Oya, N. Shuto, M. Tanaka; and the Advisory Board H. Mitsuyasu (Chairman), T. Asai, M. Coantic, F.W. Dobson, Y. Furuhashi, K. Hasselmann, N. Iwata, I.S.F. Jones, M.S. Longuet Higgins, A.S. Monin, O.M. Phillips, R.W. Stewart, Y. Sugimori, T. Teramoto, G.R. Valenzuela and J.D. Woods. The Organizing Committee at Tohoku University and the Advisory Board comprise the Programme Committee.

Papers are called for on any of the topics listed above. Abstracts of about one page should be sent by 1 November 1983

to Prof. Y. Toba, Department of Geophysics, Faculty of Science, Tohoku University, Sendai, 980 Japan. The Programme Committee reserves the right to accept or reject contributions and to select those for oral presentation or for poster sessions. Completed manuscripts will be refereed prior to publication.

A joint CCCO-JSC Workshop on Modelling the Upper Ocean Boundary Layer for WCRP Objectives will be held on 26 and 27 July 1984.

International Conference on Digital Signal Processing

This Conference will be held in Florence, Italy, from 5 to 8 September 1984. It is sponsored by EURASIP, IEEE, the Imperial College of Science and Technology, University of London, the Istituto di Elettronica, Facolta d'Ingegneria, Florence, the IROE, Florence and various other institutions.

The Conference Co-Chairmen are Prof. V. Cappellini, University of Florence and IROE/CNR, and Prof. A.G. Constantini-des, Imperial College, London.

The areas covered by the Conference come under the all-embracing heading of digital signal processing. It will be devoted to advances in the theory and techniques in digital signal processing and digital filtering. Contributions on the following topics are particularly encouraged: design methods and techniques; quantization effects, accuracy and stability; multidimensional filtering methods; digital image processing; fast parallel processing; hardware implementations; array processors; applications to signal and image processing with particular reference to speech, radar and sonar signals, biomedical signals and images, remote sensing, moving object recognition and robotics.

For further information, contact:

The Organizing Secretariat
International Conference on Digital Signal Processing
c/o ENIC
via S. Caterina d'Alessandria 12
I - 50129 Florence, Italy.

XXI GENERAL ASSEMBLY OF URSI
OPEN SYMPOSIA

The following Open Symposia will be held during the XXI General Assembly of URSI in Florence, Italy (29 August - 5 September 1983). There will be two two-day symposia, and two one-day symposia. In time sequence, these will be:

OS.1 Biological Effects and Electromagnetic Waves
Wednesday 29 and Thursday 30 August

The Convener is: Prof. M. Grandolfo,
Laboratorio delle Radiazioni,
Istituto Superiore di Sanita,
Viale Regina Elena 299,
I - 00161 Roma, Italy.

This Symposium is held in conjunction with the Bioelectromagnetics Society (BEMS) meeting, which is organized in Florence on 27 and 28 August.

OS.2 Active Experiments in Space Plasmas: Ionosphere heating,
Non-linear mixing of waves, Electron and Ion beams,
Chemical releases
Friday 31 August

The Conveners are:

Dr. P. Stubbe,
Max-Planck Institut für
Ionosphärenforschung,
D - 3411 Katlenburg, FRG.

Prof. R.L. Dowden,
Department of Physics,
University of Otago,
Dunedin, New Zealand.

Dr. J. Fejer,
Arecibo Observatory,
Cornell University,
P.O.B. 995,
Arecibo, Puerto Rico 00612, USA.

OS.3 Recent Developments in Radio Techniques for Planetary
Exploration
Monday 3 September

The Convener is: Prof. S.K. Runcorn,
Department of Physics,
The University,
Newcastle upon Tyne, NE1 7RU,
United Kingdom.

This Symposium is organized in collaboration with the Coordinating Committee for the Moon and Planets (CCMP).

OS.4 Data, Signal and Image Processing in Radio Science
Tuesday 4 and Wednesday 5 September

The Conveners are:

Prof. J.L. Lacoume, Centre d'Etude des phéno- mènes aléatoires, B.P. 15, F - 38040 Grenoble Cedex, France.	Dr. D. Jones, British Antarctic Survey, Madingley Road, Cambridge CB3 0ET, United Kingdom.
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Dr. K. Tsuruda,
Institute of Space and Astronautical
Science,
Komaba 4-6-1,
Tokyo 153, Japan.

NAMES AND ADDRESSES OF URSI OFFICERS AND OFFICERS OF MEMBER COMMITTEES

The amendments listed below refer to pages 29-71 of *URSI Information Bulletin* No 223 (December 1982). A full list of names and addresses will be published in the December 1983 issue. Member Committees are invited to notify the URSI Secretariat before 15 November 1983 of any amendments to the information given in Bulletin No 223 and the present Bulletin.

1. URSI Commissions

Commission A

Israel: Mr. J. Ziv, Ministry of Communication, Migdal Shalom
Tel Aviv.

Commission D

Israel: Dr. Sh. Rushin, Department of Engineering, Tel Aviv
University, Ramat-Aviv, Tel Aviv.

Commission E

Israel: Mr. O. Hartal, P.O.B. 2250, Haifa 31021.

Commission F

Austria: Univ. Prof. W. Riedler, Institut für Nachrichten-
technik und Wellenausbreitung, Technische Univer-
sität, Infeldgasse 12, A-8010 Graz.

Sweden: Mr. A. Blomquist, Research Institute of National
Defence, Dept. 3, Box 1165, S-581 11 Linköping.

Commission H

Austria: Prof. S.J. Bauer, Institut für Meteorologie und
Geophysik, Universität Graz, Halbärthgasse 1,
A-8010 Graz.

Commission J

Austria: Prof. J. Pfleiderer, Institut für Astronomie, Uni-
versität Innsbruck, Universitätsstrasse 4, A-6020
Innsbruck.

Inter-Union Working Groups (URSI/IAGA)

URSI/IAGA.1 - Passive Electromagnetic Probing of the Magnetosphere

Co-Chairman from URSI Commission H: K. Tsuruda, Institute of Space and Astronautical Science, Komaba 4-6-1, Tokyo 153, Japan.

Co-Chairman from IAGA Division III: A.J. Smith, British Antarctic Research, Madingley Road, Cambridge CB3 0EZ, United Kingdom.

URSI/IAGA.2 - Wave Instabilities in Plasmas

Co-Chairman from URSI Commission G: E.J. Fremouw, Physical Dynamics, Inc., P.O.Box 3027, Bellevue, WA 98009, USA.

URSI Commission H: T. Sato, Theoretical Research Center for Nuclear Fusion, Hiroshima University, Hiroshima 730, Japan.

Co-Chairman from IAGA Division II: S.L. Ossakow, Code 7750, Naval Research Laboratory, Washington, D.C. 20375, USA.

IAGA Division III: L.R. Lyons, Space Environment Laboratory, NOAA R43, 325 Broadway, Boulder, CO 80303, USA.

Inter-Commission Working Groups (URSI)

Time Domain Waveform Measurements

Representing Commission C: (add) Prof. S.J. Halme, Helsinki University of Technology, E.E. Department, Otakaari 5A, SF-02150 Espoo 15 (Finland).

Effects of Human Activities on the Ionosphere and Magnetosphere, and on Telecommunications

Representing Commission G: (add) Prof. M. Mendillo, Dept. of Astronomy, Boston University, Boston, Mass. 02215, USA.

2. URSI Member Committees

Austria

President: Prof. S.J. Bauer, Institut für Meteorologie und Geophysik, Universität Graz, Halbärthgasse 1, A-8010 Graz.

Israel

President: Dr. J. Shapira, Department of Electrical Engineering, Technion, Haifa 32000.

Acting President: Dr. J. Mass, Radio Observatory, P.O.B.911, Haifa 31008.

Secretary: Dr. Z. Huminer, Radio Observatory, P.O.B. 911, Haifa 31008.

Nigeria

President: Prof. J.O. Oyinloye, Department of Physics, University of Ilorin, Ilorin.

3. List of Addresses: Changes

AARONS, Dr. J., Department of Astronomy, 725 Commonwealth Avenue, Boston, MA 02215, USA.

APEL, Dr. J.P., Applied Physics Laboratory, The John Hopkins University, John Hopkins Road, Laurel, MD 20707, USA.

OYINLOYE, Dr. O., Department of Physics, University of Ilorin, Ilorin, Nigeria.

