

Table des matières - Contents

	pages
URSI Statutes: Draft Modifications.....	1
Projet de modification des Statuts de l'URSI.....	5
News from Member Committees	
One-day Symposium on Radio Science in Ireland.....	9
URSI Meeting in Finland.....	10
URSI/IAU Symposium on Radio Astronomical Seeing.....	11
Solar-Terrestrial Predictions Workshop 1989.....	13
Second Biregional African-Latin American Conference on Radio Propagation and Spectrum Management.....	16
Announcements of Meetings and Symposia	
International Symposium on Optical and Radio Remote Sensing of the Atmospheric Environment: A Dedi- cation to Prof. S.K. Mitra on his Birth Centenary	18
International COMMSPHERE '91 Symposium.....	20
Radio Interferometry - Theory, Techniques and Appli- cations.....	22
7th Quadrennial Symposium on Solar-Terrestrial Physics.....	23
International Meeting on Mirror Antennae Construc- tions.....	24
3rd IEEE COMSOC International Multimedia Communica- tions Workshop.....	25
IMAGE'COM 90.....	26
5th International Colloquium on Physical Measurements and Signatures in Remote Sensing.....	27
16th Marconi Fellowship Award to Dr. Andrew Viterbi....	29
Books Published by URSI Personalities.....	30
List of URSI Officers and Officers of Member Committees: Amendments.....	31

URSI STATUTES

In accordance with Resolution U.3 of the URSI Council (Tel Aviv, 1987), a revised version of the URSI Statutes has been prepared by the Secretariat, and approved by the Drafting Committee and the Board of Officers. The Draft Modifications were circulated to the Member Committees in September 1989, and will be submitted to the Council in Prague for final approval.

The English and French texts are reproduced below. Modifications to previous texts are underlined for clarity.

DRAFT MODIFICATIONS TO URSI STATUTES

Art. 1 - The object of the International Union of Radio Science (Union Radio-Scientifique Internationale) is to stimulate and to coordinate, on an international basis, studies in the fields of radio, telecommunication and electronic sciences and, within these fields:

- (a) to promote and organize research requiring international cooperation, and the discussion and dissemination of the results of this research;
- (b) to encourage the adoption of common methods of measurement, and the intercomparison and standardisation of the measuring instruments used in scientific work;
- (c) to stimulate and coordinate studies of
 - the scientific aspects of telecommunications using electromagnetic waves, guided and unguided;
 - the generation and detection of these waves, and the processing of the data they carry.

Art. 2 to 8 remain unchanged. Art. 9 becomes:

Art. 9 - Unless the Council decides otherwise, a Member Committee which has not paid its annual contribution for two years is considered to have resigned from the Union. The Committee may, however, apply for Associate Membership.

Arts 10, 11 and 12 remain unchanged. Add new Articles as follows:

ASSOCIATE MEMBERSHIP

Art. 13 - Associate Membership is reserved, as an option, for a) Committees which are established in accordance with Art. 3, 4 and 5, but are not yet ready for full membership; and b) Committees which, being already Members of the Union, wish to transfer temporarily to Associate Membership for financial reasons. The duration of Associate Membership is not to exceed six years.

Art. 14 - Associate Member Committees are admitted to the Union at an Ordinary General Assembly.

Art. 15 - Associate Member Committees are not required to pay an annual contribution to the Union. They have no voting rights in the Council and in the Commissions, and have no rights to the assets of the Union.

Art. 16 - Each Associate Member Committee appoints one observer to the Council, and one observer to each Commission. The same observer can represent his Committee on the Council and on more than one Commission.

Former Art. 13 to 36 remain unchanged, but are numbered 17 to 40. Former Art. 37 becomes:

Art. 41 - (a) The Secretary General is responsible for the management of the affairs of the Union and for the organization of its work under the direction of the Board of Officers. In particular he is responsible for the implementation of the Resolutions adopted during General Assemblies, for maintaining contact with the Member Committees, the Associate Member Committees, the Commissions and other organs of the Union, and for the publications of the Union.

(b) The Board is empowered to appoint, on nomination by the Secretary General, an Assistant Secretary General, who will serve from the date of his appointment until the end of

the next Ordinary General Assembly, The Secretary General may delegate some of his duties to the Assistant Secretary General.

Former Art. 38 to 40 remain unchanged, but are numbered 42 to 44. Add new Article as follows:

Art. 45 - The formal admission of new Associate Member Committees by the Council takes place at an Ordinary General Assembly. Provisional admission to Associate Membership can be authorized by the Board.

Former Art. 41 to 53 remain unchanged, but are numbered 46 to 58. Art. 54 becomes:

Art. 59 - The Ordinary General Assembly is attended by

- (a) Members of the Board of Officers,
- (b) Chairmen and Vice-Chairmen of Commissions,
- (c) Chairmen of Scientific Committees,
- (d) Delegations of Member Committees, each of which comprises the Council Representative, Official Members of Commissions, and Ordinary Delegates,
- (e) Delegations of Associate Member Committees, each of which comprises the Observer to the Council, Observers to the Commissions, and Ordinary Delegates,
- (f) Honorary and past Presidents of the Union,
- (g) Representatives invited in accordance with Art. 61.

Former Art. 55 and 56 remain unchanged, but are numbered 60 to 61. Art. 57 becomes:

Art. 62 - The date and place of the General Assembly are communicated by the Secretary General to Member Committees and Associate Member Committees not less than six months before the beginning of the Assembly.

Former Art. 58 and 59 remain unchanged, but are numbered 63 and 64. Art. 60 becomes:

Art. 65 - The Secretary General prepares the agenda for the meetings of the Council and communicates them to the Member Committees and Associate Member Committees not less than three months before the beginning of the Assembly.

Former Art. 61 remains unchanged, but is numbered 66. Art. 62 becomes:

Art. 67 - The Council has full power to make decisions on any activity of the Union relating to the objects defined in Art. 1.

In particular it has the following powers and obligations:

.....

- (f) on the proposal of the Board of Officers, to examine and, if thought fit, to accept applications for Associate Membership of the Union;

.....

Former Art. 63 remains unchanged, but is numbered 68. Art. 64 becomes:

Art. 69 - In the absence of any relevant provisions in the Statutes, or in extraordinary circumstances, the Council is authorized:

- (a) to make decisions on all matters relating to the activities of the Union,
- (b) to make rules for the conduct of the work of the General Assemblies.

These decisions and rules must not contain provisions contrary to the terms of the Statutes.

Former Art. 65 to 77 remain unchanged, but are numbered 70 to 82.

PROJET DE MODIFICATION DES STATUTS

Art. 1 - L'Union Radio-Scientifique Internationale a pour but de stimuler et de coordonner, à l'échelle internationale, les études dans les domaines des sciences de la radioélectricité, des télécommunications et de l'électronique et, plus particulièrement:

- a) de promouvoir et d'organiser les recherches exigeant une coopération internationale, ainsi que la discussion et la diffusion des résultats de ces recherches;
- b) d'encourager l'adoption de méthodes de mesure communes, ainsi que la comparaison et l'étalonnage des instruments de mesure utilisés dans les travaux scientifiques;
- c) de stimuler et de coordonner les études portant sur
 - les aspects scientifiques des télécommunications utilisant les ondes électromagnétiques guidées et non guidées,
 - la production et la détection de ces ondes, ainsi que le traitement des données dont elles sont porteuses.

Les articles 2 à 8 restent inchangés; l'article 9 est modifié comme suit:

Art. 9 - A moins d'une décision contraire du Conseil, tout Comité Membre qui n'aura pas versé sa contribution annuelle à deux reprises est considéré comme cessant de faire partie de l'Union. Ce Comité pourra néanmoins demander à être admis dans la catégorie des Membres associés.

Les articles 10, 11 et 12 restent inchangés; ajouter les 4 articles suivants.

MEMBRES ASSOCIES

Art. 13 - La catégorie des Membres associés est réservée, à titre d'option, a) aux Comités qui sont créés en vertu des Art. 3, 4 et 5, mais qui ne réunissent pas encore toutes les conditions pour solliciter leur adhésion en tant que Membres, et b) aux Comités Membres de l'Union qui, pour des raisons d'ordre financier, souhaitent passer temporairement à la catégorie des Membres associés, la période pendant laquelle un

Comité fait partie de l'Union en tant que Membre associé ne pourra pas dépasser six ans.

Art. 14 - Les Membres associés de l'Union sont les Comités dont les demandes d'admission dans cette catégorie ont été acceptées au cours d'une Assemblée générale ordinaire.

Art. 15 - Les Comités Membres associés ne versent pas de contribution annuelle à l'Union. Ils n'ont pas droit de vote au Conseil et dans les Commissions, et n'ont aucun droit à l'actif de l'Union.

Art. 16 - Chaque Comité Membre associé désigne un observateur au Conseil et un observateur au sein de chacune des Commissions. Un même observateur peut représenter son Comité au sein du Conseil et de plusieurs Commissions.

Les articles 13 à 36 restent inchangés, mais sont numérotés 17 à 40. L'article 37 est modifié comme suit:

Art. 41 - a) Le Secrétaire général assure la gestion des affaires de l'Union et l'organisation de ses activités en conformité avec les directives du Bureau. Il est chargé, en particulier, de la mise en oeuvre des résolutions adoptées au cours des Assemblées générales, du maintien des relations avec les Comités Membres, les Comités Membres associés, les Commissions et autres organes de l'Union, ainsi que des publications de l'Union.

b) Le Bureau a pouvoir de désigner, sur proposition du Secrétaire général, un Secrétaire général adjoint qui restera en fonction de la date de sa nomination jusqu'à la fin de l'Assemblée générale ordinaire suivante. Le Secrétaire général peut déléguer certaines des tâches qui lui incombent au Secrétaire général adjoint.

Les articles 38 à 40 restent inchangés, mais sont numérotés 42 à 44. L'article suivant est nouveau.

Art. 45 - L'admission officielle de nouveaux Comités Membres associés par le Conseil ne peut s'effectuer qu'au cours d'une Assemblée générale ordinaire. L'admission provisoire de Membres associés peut être autorisée par le Bureau.

Les articles 41 à 53 restent inchangés, mais sont numérotés 46 à 58. L'article 54 est modifié comme suit:

Art. 59 - A l'Assemblée générale ordinaire assistent:

- a) les membres du Bureau,
- b) les Présidents et Vice-Présidents des Commissions,
- c) les Présidents des Comités scientifiques,
- d) les délégations des Comités Membres comprenant chacune le Représentant au Conseil, les Membres officiels des Commissions et des délégués ordinaires,
- e) les délégations des Comités Membres associés comprenant chacune l'observateur au Conseil, les observateurs au sein des Commissions et des délégués ordinaires,
- f) les Présidents d'honneur et anciens Présidents de l'Union,
- g) les représentants invités en vertu de l'Art. 61.

Les articles 55 et 56 restent inchangés, mais sont numérotés 60 et 61. L'article 57 est modifié comme suit:

Art. 62 - La date et le lieu de l'Assemblée générale sont communiqués par le Secrétaire général aux Comités Membres et aux Comités Membres associés au moins six mois avant l'ouverture de l'Assemblée.

Les articles 58 et 59 restent inchangés, mais sont numérotés 63 et 64. L'article 60 est modifié comme suit:

Art. 65 - L'ordre du jour des séances du Conseil est préparé par le Secrétaire général et communiqué aux Comités Membres et aux Comités Membres associés au moins trois mois avant l'ouverture de l'Assemblée.

L'article 61 reste inchangé, mais porte le numéro 66. L'article 62 est modifié comme suit:

Art. 67 - Le Conseil a pleins pouvoirs pour décider de toutes les activités découlant pour l'Union des buts définis à l'Art.

1. Il a pour attributions particulières:

.....

- (f) sur proposition du Bureau, d'examiner les demandes d'admission à l'Union dans la catégorie des Membres associés et, si jugé opportun, d'accepter ces demandes;

.....

L'article 63 reste inchangé, mais porte le numéro 68. L'article 64 est modifié comme suit:

Art. 69 - A défaut de prescriptions pertinentes dans les Statuts, ou bien dans des circonstances exceptionnelles, le Conseil est autorisé:

- a) à prendre des décisions sur toutes les questions relatives aux activités de l'Union;
- b) à établir des règles pour la conduite des travaux de l'Assemblée générale.

Ces décisions et règles ne peuvent contenir de prescriptions qui seraient en contradiction avec les termes des Statuts.

Les articles 65 à 77 restent inchangés, mais sont numérotés 70 à 82.

NEWS FROM MEMBER COMMITTEES

ONE-DAY SYMPOSIUM ON RADIO SCIENCE IN IRELAND

The Symposium, fourth of a series begun in October 1984, was organised by the URSI Sub-Committee of the Royal Irish Academy's National Committee for Engineering Sciences.

The 63 participants, comprising scientists and engineers from academic, government and industrial institutions, constituted the best attendance to-date at these symposia. The organisers considered the Symposium a decided success and were pleased that so many participants attended from regions outside of Dublin.

The following papers were discussed:

- "High definition television", Mr. G. Waters with Mr. D. Ward, European Broadcasting Union.
- "The Radio Data System - a draft European standard - and its implementation in Ireland", Mr. T. Halford, Telefis Eireann.
- "Mobile Radio at Trinity College, Dublin", Dr. P.C. Fannin, Trinity College, Dublin.
- "Digital modems", Dr. A. Fagan, University College, Dublin.
- "The impact of GaAs MMICs on microwave communications", Dr. V.F. Fusco, Queen's University of Belfast.
- "Fibre optic device development", Prof. C. Hussey, University of Limerick.
- "Type approval of VHF radio equipment for use in the Land Mobile Band 450 to 470 MHz", Dr. B.P. McArdle, Department of Communications.
- "Microwave reflectometer diagnostics of hot fusion plasmas", Prof. M.C. Sexton, M.R.I.A., University College, Cork.

Dublin, January 1990

Dr. S.S. Swords

URSI MEETING IN FINLAND

The 15th Convention on Radio Science, organized jointly by the URSI Committee in Finland and IEEE, was held in Tampere, Finland on 20-21 November 1989. The programme consisted of sessions on:

- Optoelectronics (systems, lasers, applications, components, measurements)
- Digital signal processing
- Digital logic
- DSP System design and applications
- Magnetic signals and fields
- Magnetic fields and EM radiation
- Medical engineering
- Non-linear signal processing
- Microwaves
- Integrated circuits
- Active circuits
- Design and modelling of VLSI circuits
- ASTC prototypes
- Television systems
- Radars and antennas.

The papers were presented by some 97 authors.

URSI/IAU SYMPOSIUM ON RADIO ASTRONOMICAL SEEING

This Symposium was held in Beijing, China, from 15 to 19 May 1989 under the sponsorship of URSI, IAU, the National Nature Sciences Foundation of China, the Chinese Institute of Electronics, the Chinese Astronomical Society and the Beijing Astronomical Observatory. The Chairman of the Scientific Programme Committee was J.E. Baldwin (UK), and Wang Shouguan and Sha Zong were Co-Chairmen of the Local Organizing Committee. The 76 participants came from the following countries: Australia, China, France, India, Japan, Netherlands, Sweden, UK, USA and USSR.

This Symposium was the first international meeting devoted to the effects on radioastronomical observation of processes in the troposphere, ionosphere and the interplanetary and interstellar media. It included 55 invited and contributed papers spread over six half-day sessions. The topics covered included first the basic physics of fluctuations in the atmosphere, measurements of tropospheric phase fluctuations at many sites, wavelengths and over a very wide range of baselines from a few metres to thousands of kilometres, anomalous refraction at mm wavelengths and discussions of atmospheric opacity. A second major area concerned the influence on observations of large and small scale disturbances in the ionosphere. Much of the experimental material on these two topics was being presented for the first time and there was particular interest in the mm wave results. Methods for correcting observations for atmospheric effects were then discussed which led on to assessment of the optimum designs of radio telescopes for overcoming the effects. The later sessions were devoted to problems associated with scattering and scintillation due to irregularities in the ionosphere, interplanetary space and the interstellar medium. A particularly valuable feature of the meeting was that of bringing together scientists whose interests were principally in the physics of the media involved with those who strive to make good images and for whom the atmosphere is simply an unwanted problem. The published proceedings will be particularly valuable since so little has been published so far and that is very widely scattered in the literature.

The participants had an exceptionally time both in the sessions and outside. An enjoyable reception was hosted by the Chinese Institute of Electronics, visits were made to the Miyun Radio Observatory some 150 km from Beijing where the metre wavelength aperture synthesis array is in operation and to the Great Wall and Ming tombs. A memorable banquet brought the formal proceedings to a close.

J.E. BALDWIN

SOLAR-TERRESTRIAL PREDICTIONS WORKSHOP 1989

As announced on page 19 of the December 1989 issue of the "URSI Information Bulletin" a fuller report on the Solar-Terrestrial Predictions Workshop, which was held in Sydney, Australia from 16 to 20 October 1989, has been included by Dr. R. Thompson, Chairman IUWDS, in his annual report for the year 1989. This fuller version is reproduced below.

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More than 100 scientists from 14 countries attended the third IUWDS Solar-Terrestrial Predictions Workshop during 16-20 October 1989 at Leura near Sydney, Australia. The local organisation of the meeting was undertaken by IPS Radio and Space Services (Australian Government Department of Administrative Services). As with the earlier meetings in Boulder (1979) and Meudon (1984), the purpose of the meeting was to bring solar terrestrial physicists together with forecasters of solar terrestrial conditions and the users of these forecasts to review current problems and requirements and plan for research for the years ahead.

The work of the meeting was conducted by three Working Groups: "The Sun and Solar Wind", "The Geomagnetic and Space Environment", and "The Ionosphere". These groups met either separately or in joint sessions to discuss problems of wider interest.

Key issues addressed by the "Sun and Solar Wind" Working Group included: the nature, origin and prediction of the solar cycle; the evolution of solar regions; the prediction of solar activity such as solar flares and proton events; and the transmission of disturbances in the solar wind. A pleasing feature of the presentations to the Working Group was that the majority were directed towards providing tools to improve forecasts of solar terrestrial conditions.

The "Geomagnetic and Space Environment" Working Group addressed problems such as: the relationship of geomagnetic disturbance to the solar wind; the effects of disturbances on terrestrial systems such as power lines and pipelines; the effects of disturbances on satellites; the use and meaning of disturbance indicators; and the use of persistence climato-

logies for improving forecasts. There were also presentations and discussion of the need for "forecast validation" so that the effects of new knowledge on forecasts can be assessed objectively.

While many ionospheric services can be planned using conventional predictions, the Ionospheric Working Group preferred a broader approach. They accepted the idea that ionospheric predictions need to include all external energy sources such as magnetospheric and solar wind sources. Ionospheric problems identified at the 1984 Meudon Workshop remain unsolved. The group felt it was essential that close links should be developed between modelling and coordinated observational programmes if these problems are ever to be dealt with. While these ideas are not new, the current models are better and it was clear from the papers delivered that there is now a strong commitment to global and regional studies.

One of the key issues for the entire Workshop was the debate on the solar origins of disturbances. In an invited review, Professor Antony Hewish (Cambridge) argued that all disturbances arise from coronal hole regions in the outer atmosphere of the sun and not from events such as solar flares. This claim was disputed by many scientists who stressed the role of coronal mass ejections as the origin of interplanetary disturbances. Despite this debate, there was general agreement that the interplanetary scintillation technique used by Hewish will form an important component of future disturbance forecasting. The meeting encouraged the development of scintillation arrays in the United Kingdom, Japan, India and Australia.

A major burst of activity on the sun during the meeting helped to emphasize the importance of the topic. This burst included a number of intense solar flares, and a strong ground level proton event and a strong geomagnetic/ionospheric disturbance which affected ionospheric communications, navigation and other systems. The disturbance was accompanied by spectacular auroral displays seen over southern Australia.

Papers from the Workshop are being collected into a volume - The Proceedings of the Workshop - which will be available by the middle of 1990.

There was general agreement that these workshops play a valuable role and should be continued with a shorter interval between meetings. IUWDS has accepted an offer by the

Geological Survey of Canada to host the next Workshop in Ottawa during 1992. The meeting will provide an ideal opportunity to discuss the events of the next few years of what promises to be an extremely interesting solar cycle.

Richard THOMPSON
Chairman, IUWDS.

SECOND BIREGIONAL AFRICAN-LATIN AMERICAN CONFERENCE ON RADIO PROPAGATION AND SPECTRUM MANAGEMENT

This Conference was held at the University of Ilorin from 6 to 8 November 1989, under the sponsorship of URSI, the International Centre for Theoretical Physics (Trieste), COSTED, and several Nigerian organizations. A related activity, The International Workshop on Advances in Communication Physics and Techniques, took place at the same venue from 6 to 11 November. Some 10 Young Scientists, two of them directly supported by URSI, attended the meeting. A special session was held for them, at which they learnt about URSI, and during which they spoke on their current research interests and difficulties. They presented the following papers:

- Electromagnetic spectrum and the science of astronomy, E.O. Ekpe (Nigeria).
- Propagation path design techniques of microwave frequencies, G.N. Onoh and J. Eke (Nigeria), presented by K.B. Odedina.
- A brief idea on the telecommunications in Congo, L. Voumbo Matoumona (Congo).
- Rain effects on terrestrial microwave links, T.C. Wann (Guinea).

In the main body of the Conference, 3 special lectures and 10 review papers were presented by speakers from Nigeria, Brazil and Argentina.

An important event during the Conference was the launching of the ICTP (assisted) Biregional Network of Radio Propagation Research Groups in the two regions, on 8 November 1989, by Prof. S.M. Radicella, Chairman of the URSI Standing Committee on Developing Countries, on behalf of the Director of the International Centre for Theoretical Physics. During the concluding session, participants from the different research groups in the two regions spoke on the ongoing research and results in their places and highlighted possible focus for the biregional efforts, such as electron density (including TEC) modelling, signal strength and noise measurements, VHF studies in the lower atmosphere with receivers in Argentina, Brazil and Nigeria, atmospheric interaction dust (e.g. Harmattan) and rain effects on propagation, and possible

participation in Tropospheric Experiment (TROPEX) using the Olympus satellite (12.4 GHz). Equipment donations are still needed. Training in and setting up of laboratories for teaching and research in optical communications are also to be encouraged.

Prof. J.O. OYINLOYE
University of Ilorin.

ANNOUNCEMENTS OF MEETINGS AND SYMPOSIA

PRELIMINARY ANNOUNCEMENT

INTERNATIONAL SYMPOSIUM ON OPTICAL AND RADIO REMOTE SENSING OF THE ATMOSPHERIC ENVIRONMENT

A Dedication to Prof. S.K. Mitra on his Birth Centenary
(24-26 October 1990, N.P.L, New Delhi)

The birth centenary year of Prof. S.K. Mitra commenced on 24 October 1989. His pioneering contributions in the areas of Upper Atmospheric Physics and Radio Science have been internationally acclaimed. It has been suggested that we have, on a national and international level, the S.K. Mitra Birth Centenary celebrations starting on 24 October 1989 and going up to 24 October 1990. Special lectures, exhibitions and video films, special issue of Indian Journal of Radio and Space Physics (IJRSP), S.K. Mitra Memorial Travel Fellowship for a Young Scientist to enable him/her to attend URSI General Assemblies, creation of a S.K. Mitra distinguished visiting Professor's chair, national and international symposia have been suggested as part of the celebrations.

An Organizing Committee, chaired by Dr. A.P. Mitra, Director General of the Council of Scientific and Industrial Research (CSIR), has been constituted under the auspices of the Indian National Science Academy to organize and manage these activities.

A first series of lectures was arranged on 24 October 1989 at the Institute of Radio Physics and Electronics, Calcutta University. A distinguished lecture by Prof. S.Chandrasekhar, Nobel Laureate, was also arranged at Calcutta University on 1 December 1989. Prof. U.R. Rao, Chairman of the Indian Space Research Organization has offered to dedicate the next National Space Science Symposium, to be held in March 1990 at Nagpur University, to Professor S.K. Mitra. The October 1990 issue of IJRSP will be a special issue dedicated to Prof. S.K. Mitra and will have only invited contributions on subjects centered around a theme of Prof. S.K. Mitra's work.

As mentioned earlier the celebrations will conclude with

the organization of an International Symposium on Optical and Radio Remote Sensing of the Atmospheric Environment, being arranged at New Delhi from 24 to 26 October 1990. We seek your contributions in the following or related topics:

- Atmospheric radars
- Neutral-ion modelling
- Ozone
- Communication during disturbances
- Equatorial ionosphere
- Solar-terrestrial relationship
- Magnetosphere
- Solar radiations and their interactions with
terrestrial atmosphere
- Ionospheric chemistry
- Satellites and atmosphere
- Radio remote sensing and radiometry
- Solar radio astronomy
- Planetary ionospheres.

The organizers eagerly look forward to your active interest and participation in the International Symposium.

B.S. MATHUR
Convenor, S.K. Mitra International
Symposium.

Further information available at the following address:

Dr. B.S. Mathur
Science Secretary-II
Council of Scientific and Industrial
Research (CSIR)
Anusandhan Bhavan
Rafi Marg
New Delhi 110001
India.

INTERNATIONAL COMMSPHERE '91 SYMPOSIUM

This Symposium is being organized by the Israel Committee for Radio Science under the sponsorship of URSI. It will be held in Herzliya, Israel from 23 to 25 April 1991. The Symposium Chairman is Dr. J. Shapira, and the International Organizing Committee includes: I. Bar-David, E.R. Freeman, O. Hartal, D. Rosen, J. Shapira, D. Shklarsky, R.G. Struzak, F.L.H.M. Stumpers, U. Timor, A. Viterbi and M. Wik.

Theme and Scope

Future telecommunication increasingly depends on the congestion of the transmission medium. Spectrum allocation and regulation has reached its limits in face of the fast growing demand for communication services, and novel approaches become key to future development. Transmission localization and coordination via appropriate network topology, trade offs of time, directivity, modulation and coding filters - these are tightly bound with national interests and international coordination.

Spurious radiation is poured to that same medium by electrical and electronic equipment, whose abundance is also soaring throughout the world. That raises the EM noise level, disturbing communication and other sensitive equipment, to a point that coexistence of all these services becomes a concern of societies as much as industries.

The COMMSPHERE Symposium is intended to focus on the common EM propagation medium as a major constraint in the development and operation of communication services and other electrical and electronic equipment.

The interdisciplinary open discussion of various aspects is expected to breed trends of development of these services and support international cooperation.

Areas of Interest

- Bandwidth efficient modulation
- Future telecommunication architectures

- Issues of congestion in geostationary orbit satellites
- CDMA vs TDMA for cellular radio
- Modelling of communication channels and EM environment
- Modelling of the propagation and interaction mechanisms
- Criteria for the Spectrum Resource value and its management policies
- Methods and tools for spectrum management and monitoring
- Interaction with non intended radiation.

Prospective authors are invited to submit papers in any of the areas listed above to the Symposium Secretariat.

All presentations will be in English.

Deadlines

1000 word extended summaries for review (5 copies)	1 June 1990
Notification of acceptance	1 October 1990
Camera ready copies	15 February 1991.

Symposium Secretariat

ORTRA Ltd.
Kaufman 2
P.O.Box 50432
Tel Aviv
61500 Israel.
Tel : (972) 3 664 825
Telex: 361142 ORTRL
Fax : (972) 3 660 952.

RADIO INTERFEROMETRY
THEORY, TECHNIQUES AND APPLICATIONS

IAU Colloquium No131

Cosponsored by URSI

The Colloquium will be held from 8 to 12 October 1990 in Socorro, New Mexico, USA. The membership of the Scientific Organizing Committee is as follows: T.J. Cornwell, Chairman (USA), J.E. Baldwin (UK), D. Downes (France), R.D. Ekers (Australia), M. Ishiguro (Japan), M. Matveyenko (USSR), R.T. Schilizzi (Netherlands), Wang Shouguan (China), G. Swarup (India), W.J. Welch (USA), J. Yen (Canada). The Local Organizing Committee is chaired by R. Havlen (USA).

Preliminary Scientific Programme

The advances in Radio Interferometry over the past 10-15 years have led to the establishment of radio imaging as a standard tool in astrophysics, and to the widespread use of diverse interferometric techniques across many astronomical and geophysical disciplines. Despite the maturity of the technique, many advances in interferometry are still being made and new arrays are being constructed. The conference will address these new areas of research and endeavour:

- Normal theory of interferometry, extensions of the theory to unusual circumstances, Array configuration design.
- Antenna and feed design for interferometry, RF/IF design for interferometry, Correlators, Special purpose hardware.
- Calibration, Imaging, Image Display and Analysis, Geodesy, Astrometry, Applications of interferometric techniques to single-dish imaging.
- New arrays and planned arrays.

In addition to the normal conference, it is planned to organize a celebration of the 10th anniversary of the dedication of the Very Large Array, to be held on 10 October. A discussion of the design and construction of the VLA, at the VLA site, will be held.

Further information available from:

T.J. Cornwell
National Radio Astronomy Observatory
P.O.Box 0
Socorro, NM 87801
USA.

Tel.: (1) 505-835 7333

E-mail: TCORNWEL NRAO
TCORNWEL NRAO.EDU
NRAO CORNWEL.

7th QUADRENNIAL SYMPOSIUM ON SOLAR-TERRESTRIAL PHYSICS

The Symposium will be held in The Hague, Netherlands, in conjunction with the COSPAR Plenary Meeting, from 25 to 30 June 1990. The Symposium is sponsored by SCOSTEP, COSPAR, IAGA, IAMAP, IUPAP and URSI.

The 7th Quadrennial Symposium on Solar-Terrestrial Physics will be on the theme of the coupling processes between regions in the solar-terrestrial chain. It will form the scientific benchmark for the Solar-Terrestrial Energy Programme (STEP) to be conducted in the period 1990-95.

The Programme Committee consists of: K.D. Cole (Australia), Chairman; M.A. Celler (USA), K. Labitzke (FRG), C.H. Liu (USA), M.E. Machado (Argentina), H. Oya (Japan), R.W. Schunk (USA), R. Schwenn (FRG), D.J. Southwood (UK) and O.L. Vaisberg (USSR).

The Programme will include the following sessions:

- The Sun: long-term variability
- The Sun: transient phenomena
- Energy and mass transfer from the corona to the interplanetary medium and propagation to outer regions
- Interplanetary space/magnetosphere coupling
- Magnetosphere coupling to the ionosphere and thermosphere
- Ionosphere/thermosphere coupling and response to energy and momentum inputs

- Middle atmosphere response to forcing from above and below
- Solar variability effects in the troposphere and below
- Long-term observations and data systems in STP.

Further information may be obtained from:

SCOSTEP Secretariat
Department of Electrical and Computer
Engineering
University of Illinois
1406 W. Green Street
Urbana, IL 61801
USA.

Tel.: (1) 217-333 4151
Fax : (1) 217-244 5624
Telex: 5101011969 UI TELCOM URUD.

INTERNATIONAL MEETING ON MIRROR ANTENNAE CONSTRUCTIONS

This URSI-sponsored meeting will be held in Riga, USSR from 6 to 8 September 1990, right after the URSI General Assembly in Prague. General information, and registration forms, may be obtained from:

Dr. E. Bervalds, Acting Chairman of the Organizing
Committee
Radioastrophysical Observatory
Latvian SSR Academy of Sciences
Turgeneva 19
226524 Riga
USSR, Latvia.
Telex: 161193, Kolba, SU.

3rd IEEE COMSOC INTERNATIONAL MULTIMEDIA
COMMUNICATIONS WORKSHOP

This Workshop will be held in Bordeaux, France from 15 to 17 November 1990, just before IMAGE'COM 90. The Workshop will deal with multimedia communication, more specifically with:

- technologies for multimedia applications (data processing, audio and video);
- networks for multimedia services (network architecture, transport and switching);
- multimedia terminals and human interfaces;
- applications, field trials and recent developments.

Abstracts should be submitted, before 1 June 1990, to

Jean-Pierre COUDREUSE
Technical Programme Chairman - Multimedia '90
CNET LAA/ATM, route de Trégastel
F-22300 Lannion, France.

Phone: (33) 96-05 31 89
Fax : (33) 96-05 29 03.

The address of the Secretariat is

c/o Jean RIVENC
Secretariat - Multimedia '90
ADERA
B.P. 48
F-33166 St-Médard-en-Jalles Cedex
France.

Phone: (33) 56-70 68 53
Fax : (33) 56-95 98 83.

Information can be obtained from:

North America

N. Georganas
Phone: (1) 613-564 8222
Fax : (1) 613-564 7681

Europe

D. Newmann
Phone: (44) 473-64 4860
Fax : (44) 473-64 2308

Asia

R. Yatsuboshi

Phone: (81) 44-777 1111 (2 6120)

Fax : (81) 44-754 2582.

IMAGE'COM 90

This International Conference will be held in Bordeaux, France from 19 to 21 November 1990. In the world of to-orrow the image will become more and more important for

- training/motivation
- detection/surveillance
- conception/production
- decision making/management
- information/entertainment.

Papers covering these aspects will be presented in either English or French. Simultaneous translation will be provided during the Conference. Information can be obtained from:

ADERA

IMAGE'COM 90

B.P. 48

F-33166 Saint-Médard en Jalles Cedex
France.

Phone: (33) 56-70 68 56

Fax : (33) 56-95 98 83.

5th INTERNATIONAL COLLOQUIUM ON PHYSICAL MEASUREMENTS
AND SIGNATURES IN REMOTE SENSING

The Centre National d'Etudes Spatiales (CNES) organizes, from 14 to 18 January 1991, at Courchevel (France,, in the framework of Working Group 1 (Physical Measurements and Signatures in Remote Sensing; Chairman: G. Guyot) of Commission VII of the International Society for Photogrammetry and Remote Sensing (ISPRS), the 5th International Colloquium on Physical Measurements and Signatures in Remote Sensing, with the collaboration of the European Space Agency (ESA), the Centre National de la Recherche Scientifique (CNRS), and the Institut National de la Recherche Agronomique (INRA). The Colloquium is being co-sponsored by a number of societies in USA, Canada and Europe.

This Colloquium follows the four colloquia organized since 1981 on Spectral Signatures of Objects in Remote Sensing. In 1988 the ISPRS Council recommended that the activity of Working Group VII/1 be continued and extended. It is the reason why the Group is not only interested in analysing the relationships between the specific properties of a target (vegetative canopy, soil, rocks, water surfaces, snow, ice, etc.) and its spectral characteristics in different wavelength ranges, from ultraviolet to microwaves, but also in the determination of the factors which can affect the spectral response of an object (atmospheric effects, measuring techniques...) and in the development of interpretation models.

The presentations at the Colloquium will cover the following points defined by the International Scientific Committee:

1. Modelling of measuring systems: calibration and inter-calibration problems, state of the art for atmospheric correction algorithms, effects of atmospheric water vapour...
2. High spectral resolution from visible to thermal infrared, utilization of spectral imaging systems (geology, ice and snow cover, vegetation, oceanography, sedimentology, atmosphere...).
3. Active microwaves: polarimetric and multifrequency radar signatures; results of the ERS1 preparatory studies and of airborne SAR campaigns.

4. Passive microwaves.
5. Directional and polarimetric effects in the optical domain.
6. Synergy between observations in different wavelength domains (optical domain, active and passive microwaves).
7. Laser active remote sensing.
8. Assimilation of remote sensing data in numerical models.
9. Spatial and temporal signatures.
10. Remote sensing contribution to the accomplishment of the objective of multidisciplinary programmes.

Further more two round tables will be organised on the following themes:

- Future systems and projects for Earth observation.
- Confrontation between physical measurement models and models representing processes of the biosphere.

The deadline for submission of abstracts (in English or French) is 15 July 1990.

Further information available from:

Dr. Gérard Guyot
INRA Bioclimatologie
B.P. 91
F-84143 Montfavet Cedex, France.
Tel.: (33) 90 31 60 94
Fax : (33) 90 31 62 98.

16TH MARCONI FELLOWSHIP AWARD TO DR. ANDREW VITERBI

The Marconi International Fellowship Council has chosen Dr. Andrew Viterbi to receive the 16th Marconi International Fellowship Award. Dr. Viterbi was recognized for his achievements in the field of digital communications in many adverse environments, particularly through his widely used algorithm. Presentation ceremonies will be held at the Smithsonian Institution on 25 April 1990.

Dr. Viterbi is best known as the inventor of the Viterbi Algorithm which is known as maximum likelihood decoding when applied to signals transmitted over noisy or otherwise adverse communications channels. The algorithm yields the most reliable information that can be retrieved from such signals and has been utilized in the transmission of signals from millions of miles deep in space as well as in a wide variety of communications systems.

BOOKS PUBLISHED BY URSI PERSONALITIES

RADIOWAVE PROPAGATION

M.P.M. Hall and L.W. Barclay (Eds.)

Radiowave propagation. Electromagnetic wave propagation. Basic radio systems parameters. Groundwave propagation. Basic physics of the ionosphere. Propagation of radiowaves in the ionosphere. VLF, LF and MF applications and predictions. HF applications and predictions. Clear-air aspects of the troposphere and their effects on propagation mechanisms from VHF to mm waves. Nature of precipitation, cloud and atmospheric gases and their effects on propagation mechanisms from VHF to mm waves. Terrestrial propagation reliability, from VHF to mm waves. Earth-space propagation reliability from VHF to mm waves. Prediction of interference levels and of frequency coordination distances. Propagation effects on VHF and UHF broadcasting. Propagation effects on mobile services.

296 pp. 229 x 248 mm, casebound, ISBN 086341 156 8.
IEE Books, 1989.

LIST OF URSI OFFICERS AND OFFICERS OF
MEMBER COMMITTEES: AMENDMENTS

Amendments to the List published in No 251 (December issue) of the *URSI Information Bulletin* are listed below.

1. Member Committees

BRAZIL

President: Prof. P. Kaufmann, Escola Politecnica, Universidade de Sao Paulo, C.P. 61548, 05508 Sao Paulo, S.P., Brazil.

ISRAEL

Acting President during Dr. J. Shapira's sabbatical leave-of-absence: Dr. Uzi Timor.

SPAIN

President: Prof. J.L. Sebastian Franco, Dpto. Fisica Aplicada III, Facultad de Ciencias Fisicas, Universidad Complutense, 28040 Madrid, Spain.

Secretary: Dr. Raimundo Villar, Consejo Superior de Investigaciones Cientificas, Serrano 144, 28006 Madrid, Spain.

2. Commissions

A. Electromagnetic Metrology

Israel: Dr. Jacob Politch, Faculty of Electrical Engineering, TECHNION, TECHNION City, Haifa 32000, Israel.

B. Fields and Waves

Israel: Dr. Ehud Heyman

C. Signals and Systems

Israel: Dr. Uzi Timor

D. Electronic and Optical Devices and Applications

Israel: Prof. A. Friesem

E. Electromagnetic Noise and Interference

Israel: Mr. Oren Hartal

F. Wave Propagation and Remote Sensing

Israel: Dr. Jonathan Mass

G. Ionospheric Radio and Propagation

Israel: Dr. Zvi Houminer

H. Waves in Plasmas

Israel: Prof. Akaron Eviatar

United Kingdom: Dr. D. Nunn, Department of Electronics and
Computer Science, The University, Southampton SO9 5NH,
UK.

3. Corrections and additions to Alphabetical Index and
Addresses

BACH ANDERSEN, Prof. J.: Tel: (45) 98-15 48 11;
Fax: (45) 98-15 67 40.

LUCAS, Dr. J.G.: Tel: (61) 2-692 3008; Fax: (61) 2-692 2828;
Telex: AA73460; E-Mail: lucas@facet.ee.su.oz.

MATTHEWS, Prof. P.A.: Tel: (44) 532-332 005;
Fax: (44) 532-332 032.

SOMLO, Dr. P.I.: Tel: (61) 2-413 7505; Fax: (61) 2-416 7902;
E-Mail: (ACSNET) somlo@dap.csiro.oz.au.

