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NEWSLETTER No. 29 - JULY 1991

To: National Correspondents, Officers and Representatives of the
Association and related organizations.

This Newsletter contains some last minute information about
arrangements for the Vienna General Assembly. Please note that our
first IASPEI Plenary Session will be held on the morning of 12 August,
before the official Union opening, which will be held in the afternoon.

This is the last Newsletter I shall be issuing, as my term as
Secretary-General expires at the Vienna Assembly. I have found this
to be a most rewarding task, and I sincerely thank all those who have
helped me with the Association's affairs during the last twelve years.
I am confident that you will continue to give the same support to my
successor.

Robin Adams

R. D. Adams
Secretary-General

OBITUARY - PROFESSOR J-P ROTHÉ

One of the true founders of our Association passed away on
6 March 1991. Professor Jean-Pierre Rothé succeeded his father, Prof.
E Rothé as Secretary-General in 1942, and remained in office until 1971,
when he was accorded the title of Honorary Secretary-General. Between
them, he and his father served in office for 49 years. From Strasbourg
Professor Rothé ran the Bureau Central International de Séismologie
(BCIS) whose Bulletins remain one of the great storehouses of seismological
information. He was active in all branches of seismology, especially
studies of seismicity and hazard, and was one of the first to realise the
significance of reservoir-induced seismicity.

His documentation of the early history of our Association, "Fifty
Years of History of the International Association of Seismology (1901 -
1951)" published in the Bulletin of the Seismological Society of America
in 1981, remains an invaluable archive of the development of international
seismology. We shall long remember his contributions.

26th GENERAL ASSEMBLY, VIENNA 11-24 AUGUST 1991

Further details are contained in the Fourth Circular, issued by the Local Organizing Committee. Those who have not received it should request a copy from:

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Mathematical Geodesy
Graz University of Technology
Steyregasse 30
A-8010 Graz, AUSTRIA

Phone +43 316 873 6346
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This circular gives details of the scientific sessions and social activities. Further information and detailed room allocation will be available on registration.

Thanks to the generosity of LOC, recipients of IASPEI grants need only pay the lowest registration fee of 2650 Austrian schillings, irrespective of the date of payment.

Programme

In a meeting of this size there are bound to be changes to the programme, and participants are advised to watch closely for Association notices in the registration area in Messepalast and the IASPEI offices in Getreidemarkt. In particular, the convenors of several sessions have requested additional time. This may cause some inconvenient programme clashes but these are unavoidable. Extensions to programmes are always at the end of the session and not at the beginning.

Plenary Sessions

IASPEI will hold two open Plenary Sessions during the Assembly at which all interested scientists are welcome. Any matter may be discussed with the agreement of a majority of those present. The first session on the opening morning of the Assembly will comprise a brief business session, followed by the Association Lecture and the Presidential Address. The main business session will be on the Wednesday evening of the second week of the Assembly. Provisional agendas are as follows:

First Plenary Session, Monday 12 Aug. a.m.

- 0900 1. President's Welcome and Introduction
2. Respect for deceased members
3. Secretary-General's Report and Presentation of Accounts
4. Appointment of:
 (i) Nominations Committee
 (ii) Resolutions Committee
 (iii) Audit Committee
5. Any other business
6. IASPEI Report on IDNDR - Prof. B A Bolt
7. Association lecture - Dr R M Hamilton
 "Losses from Natural Hazards Can be Reduced"
- 1030 Coffee Break
- 1100 Presidential Address - Prof. St. Mueller
 "Towards a Better Understanding of Crustal Dynamics"

Second Plenary Session, Wednesday 21 Aug. evening

President's Report
Secretary-General's Report
Discharge of Accounts
Relations with IUGG
Relations with Unesco
Association Activities:
 Commission Activities and Structure
 African Working Group
 IDNDR
 ISOP
Publications
Future Activities and Assemblies
Election of Officers for 1991-1995
Appointment of Representatives
Other Business
Adoption of Resolutions

Association Lecture

This will be given during the first morning of the Assembly by Dr R M Hamilton, now Acting Director of the United Nations Office for the International Decade for Natural Disaster Reduction at Geneva. Dr Hamilton, who is on secondment from the U.S. Geological Survey, and has had wide scientific and administrative experience in seismology, will give a lecture entitled:

"Losses from Natural Hazards Can be Reduced"

Improved implementation of mitigation actions is a goal of the International Decade for Natural Disaster Reduction. Advances in science and technology have provided a variety of modern techniques for anticipating the effects of natural hazards. Although far from perfect, the techniques nevertheless make it possible to monitor natural hazards, predict their effects and take actions to mitigate their impacts. The Loma Prieta, California earthquake of 1989 provides an example.

Social Event

IASPEI will be holding a social event in a Viennese "Heurigen" wine tavern on the evening of Thursday, 22 August. Tickets are available from the LOC at a cost of 260 schillings.

PUBLICATIONS

The first volume of proceedings from the Istanbul 1989 Assembly has appeared as Vol.67, No.1-2 of Physics of the Earth and Planetary Interiors, May 1991. It is "Scattering and Attenuation of Seismic Waves", edited by Prof. H. Sato.

SECRETARY-GENERAL'S REPORT 1989-1991

Administration

The Association's Secretariat has continued at the International Seismological Centre, at Thatcham, near Newbury in southern England. The Bureau met at the General Assembly at Istanbul in August 1989 and at the Regional Seismological Assembly in Africa at Nairobi in August 1990.

Assemblies

The 25th General Assembly of IASPEI was held at Istanbul, Turkey, 21 August - 1 September 1989. It was attended by 611 scientific participants and 53 accompanying persons from 52 countries, and covered a wide range of topics in symposia, workshops and working group meetings. The proceedings have been published in the IASPEI Newsletter, and convenors' summaries in the IUGG Chronicle. The papers from some symposia are being published in Elsevier journals.

A Regional Seismological Assembly in Africa was jointly organised by IASPEI, Unesco and the International Lithosphere Programme at Nairobi, Kenya, 22 - 29 August 1990. This was the first such venture in Africa and was highly successful, with 132 scientific registrants, 63 from a total of 20 African countries, and 69 from 18 countries outside Africa. A volume of proceedings is being prepared for publication as a special issue of Tectonophysics. This Assembly arose from the initiative of the joint IASPEI/Unesco/ILP Working Group on Seismology and Related Sciences in Africa, which also organised a successful training course for African seismological observers at Lusaka in August 1988.

Finance

The Financial Report for 1987 - 1990 has been published in Newsletter No.28. The main changes in the period are the increase in income from direct grants and contracts, in particular from the US National Academy of Sciences, and the growth of income from publication of Association symposia. This income has enabled the Association to continue funding attendance at its assemblies and scientific meetings, and during the period more than \$285,000, or 85% of total expenditure was spent in this way. Administration costs remain low at about 8½% of expenditure.

Commission Activities

IASPEI's scientific activities continue to be mainly carried out through its Commissions. The present Commissions are:

- Commission on Controlled Source Seismology
- Commission on Earthquake Hazard and Prediction
- Commission on Geodynamics and Tectonophysics
- International Heat Flow Commission (Jointly with IUGG, IAVCEI and IAPSO)
- Commission on Physical Properties of Material of the Earth's Interior
- Commission on Practice
- Commission on Strong Motion Seismology
- Commission on Wave Propagation
- European Seismological Commission
- Federation of Digital Broad-Band Seismograph Networks (Jointly affiliated with IASPEI and ILP)

A full review of Commission activities was given in a session 'Scientific Horizons in IASPEI' at the Istanbul General Assembly in August 1989.

The Commission on Controlled Source Seismology continues to support a series of symposia on Deep Seismic Reflection Profiling. The fourth of these, and an associated workshop was held in Germany in August-September 1990. The next is planned for Canada in 1992.

The Commission on Practice has very wide-ranging activities and has been reconstituted into 13 working groups. The Working Group on Personal Computers has proceeded with the production of IASPEI Software, and another working group has been responsible for the publication of 'The Anatomy of Seismograms', a manual of seismogram interpretation. A joint Sub-Commission on Algorithms (with the Commission on Seismological Theory) has issued the 1991 IASPEI Travel-Time Tables).

Prof. G A Sobolev was appointed Chairman of the Commission on Earthquake Hazard and Prediction following the appointment of Dr M J Berry as Secretary-General of the International Lithosphere Programme. This Commission comprises many sub-groups which have been particularly active in the fields of prediction evaluation and the effects of surface geology on strong ground motion.

The Commissions on Strong Motion Seismology, Geodynamics and Tectonophysics and the International Heat Flow Commission have all held workshops in addition to their activities at Assemblies.

The European Seismological Commission, IASPEI's only regional commission, holds two-yearly General Assemblies in years when IASPEI does not meet. At the Assembly at Barcelona, Spain, in September 1990, Dr L. Waniek was elected President.

International Commission for Earth Sciences in Africa

This organization (ICESA) was set up during the Regional Seismological Assembly at Nairobi. It has already affiliated with ILP and has been granted provisional commission status in IASPEI. As its scope is wider than that of IASPEI alone, its status with IUGG and other ICSU bodies will be discussed at the Vienna General Assembly. The Chairman of ICESA is Professor I. O. Nyambok of Kenya.

IASPEI 1991 Seismological Tables

The Sub-Commission on Earthquake Algorithms, under Professor B.L.N. Kennett, has produced and published a new set of travel-time tables for the major phases, derived from a new radially stratified earth model. Although the tables take no account of lateral heterogeneity, the model is constructed so that regional velocity models may be incorporated. The model and tables will be further discussed during the Vienna Assembly, with a view towards their eventual adoption by international seismological agencies, once they have been sufficiently tested.

IASPEI Software

The first three volumes of this set have now been produced and the fourth is due during 1991. The activities of the Working Group on Personal Computers, and its production of the IASPEI Software Library have been examined by an independent committee chaired by Professor Leon Knopoff. The committee concluded that the programme provided a valuable service at modest cost, largely due to the dedication and vigour of its leader, Dr W H K Lee. Some concern over possible competition with private software companies now appears to be resolved.

Publications

The IASPEI Newsletter continues to be issued at appropriate intervals. Twenty nine numbers have now been circulated since the Newsletter's inception early in 1980. Its primary purpose has been to keep National Correspondents and officers informed of Association affairs, but the circulation is extended to include representatives of other organizations and selected individual scientists and organizations, including those in countries with no formal links with IUGG. The circulation is about 220 and it is hoped that recipients, particularly National Correspondents, circulate relevant information to their colleagues.

The Association's agreement with Elsevier Publishing continues in force. This is of benefit to us in having to deal with only one company regarding the publication of proceedings of our symposia and brings a substantial financial benefit to us. This income is now comparable with that which we receive as IUGG allocation. There has been criticism, however, of the undue delay in the production of these special issues, and Elsevier has been asked to find ways of speeding up production. Altogether, eight symposia from the Vancouver Assembly in 1987 have now appeared, and the first of the planned volumes from the Istanbul 1989 Assembly. The proceedings of the 1990 Regional Assembly at Nairobi will appear in a single volume of Tectonophysics, with some papers reduced to extended abstracts. The Association is extremely grateful to those convenors who have devoted much time and effort to acting as Guest Editors for these volumes.

The Working Group on the Manual of Seismogram Interpretation has produced a book "Anatomy of Seismograms", edited by Prof. O Kulhanek. This volume is devoted to the analysis of analogue records, and the group is currently preparing a companion volume for digital records.

"Seismological Algorithms" edited by Prof. D J Doornbos for the Sub-Commission on Algorithms, continues to sell well, with royalties coming to the Association.

International Decade for Natural Disaster Reduction

The IASPEI IDNDR Committee, chaired by Professor B. A. Bolt, met in Lisbon in August 1990 and produced a comprehensive plan for IASPEI activities during the Decade, which will hopefully be circulated at the Vienna Assembly. It is proposed to submit this plan to the IDNDR Science and Technology Committee for approval when it next meets in September 1991. To co-ordinate the activities of the various IASPEI Commissions with an interest in the Decade, it is proposed that the Association set up an IDNDR Secretariat, and an offer to host this in China has been made by the State Seismological Bureau, Beijing.

Acknowledgement

Special thanks are due to the Director and Staff of the International Seismological Centre for their help to the Association during the twelve years in which the Association Secretariat has been situated at ISC.

OBSERVATORY-BASED PROCESSING OF DIGITAL SEISMIC DATA

This International Seismological Observing Period (ISOP) Workshop, sponsored by the Federation of Digital Broad-Band Seismograph Networks and the U.S. Geological Survey's National Earthquake Information Center, was held in Denver, Colorado, 19-22 March, 1991. The ISOP project seeks to promote the use of inexpensive personal computers and workstations to perform routine processing of seismic data at observatories or regional and national data centres. The purpose of the workshop was to survey the current status of hardware and software appropriate for observatory-based digital processing and establish standards for data measurements and analysis which can be introduced at future ISOP workshops for observatory analysts. The 50 participants represented major digital seismic networks, companies involved in seismic instrumentation, authors of software for seismological analysis, and research scientists active in the field of digital processing. The recommendations of the working groups are being compiled into a Workshop Report which will be circulated at the IUGG meeting in Vienna.

SEISMOLOGICAL PROJECTS IN ASIA

The first stage of a project to improve seismological recording in Vietnam has now been completed by Unesco and UNDP. The work has been going on since 1985 and has resulted in the modernization of five of the six existing stations and the installation of four new stations, and readings are now being received by international data centres. Computer and electronics laboratories have also been set up at the Institute of Geophysics of the National Centre for Scientific Research of Vietnam.

It is proposed that Unesco and the US Geological Survey will co-operate in modernizing the seismological service in Mongolia. This country has experienced powerful earthquakes in the past, including events of magnitude 8 in 1905 and 1957. Some seismological recording started after the 1957 earthquake, but the network has never been adequate to monitor the country's seismicity or relate it to the well-preserved fault traces that are evident. Present plans include the upgrading of equipment at five existing sites and the installation of three new stations. Long-period instruments are proposed for five sites.

The Mongolian institution involved is the Seismological Centre of the Institute of Geology, which is attached to the Academy of Sciences of Mongolia.

FORTHCOMING MEETINGS

The following is a selection of forthcoming meetings in the field of interest of the Association:

- 1991 Aug 9-4 HAZARDS 91
Perugia, ITALY
Dr T S Murty, Institute of Ocean Sciences, Box 600,
West Saanich Road, Sidney BC, CANADA V8L 4B2
- 1991 Aug 11-24 XX GENERAL ASSEMBLY IUGG
Vienna, AUSTRIA
IUGG Committee, Dept. Mathematical Geodesy, Graz University
of Technology, Steyrergasse 30, A-8010 Graz, AUSTRIA
- 1991 Aug 26-29 4th INTERNATIONAL CONFERENCE ON SEISMIC ZONATION
Stanford, California, USA
Dept. of Civil Engineering, Stanford University, Stanford,
CA. 94305-4020, USA.
- 1991 Sep 2-7 HEAT FLOW AND STRUCTURE OF THE LITHOSPHERE
Bechyne, CZECHOSLOVAKIA
Dr. V Cermak, Geophysical Institute, Bocni II, cp 1401
14131 Prague, Sporilov, CZECHOSLOVAKIA
- 1991 Sep 18-20 EARTHQUAKE, BLAST AND IMPACT
London, U.K.
Conference Officer, Inst. Civil Engineers, 1-7 Great
George Street, London SW1P 3AA, U.K.
- 1991 Oct 15-18 EARTHQUAKE PREDICTION: STATE OF THE ART
Strasbourg, FRANCE
CSEM, 5 rue Rene Descartes, F-67084 Strasbourg, Cedex
FRANCE
- 1991 Oct 23-26 SEISMICITY IN EASTERN ASIA
HONG KONG
Dr K W Lee, Charles Haswell & Partners, 3/F Bay Tower,
2-4 Sunning Road, Causeway Bay, HONG KONG
- 1991 Nov 20-23 PACIFIC CONFERENCE ON EARTHQUAKE ENGINEERING
Auckland, NEW ZEALAND
NZ National Society for Earthquake Engineering, Box 17-268,
Wellington, NEW ZEALAND
- 1992 Jul 19-25 10th WORLD CONFERENCE ON EARTHQUAKE ENGINEERING
Madrid, SPAIN
IOWCEE, C/o Tilesa, Londres 39-1°B, 28028 Madrid, SPAIN
- 1992 Aug 24-
Sep 3 INTERNATIONAL GEOLOGICAL CONGRESS
Kyoto, JAPAN
29th IGC, Box 65, Tsukuba, Ibaraki 305, JAPAN
- 1992 Sep 6-12 5th INTERNATIONAL SYMPOSIUM ON SEISMIC REFLECTION PROFILING
OF THE CONTINENTAL LITHOSPHERE
Banff, CANADA
Dr R Clowes, Rm 357, Geological Sciences, 6339 Stores Road,
University of British Columbia, Vancouver, CANADA V6T 2B4
- 1994 Jan 10-21 27th GENERAL ASSEMBLY, IASPEI
Wellington, NEW ZEALAND