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NEWSLETTER No. 27 - OCTOBER 1990

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

Those of us fortunate enough to have attended the Regional Seismological Assembly in Africa will know that it was a spectacular success, bringing together more than 60 African scientists from 20 African countries to meet with a similar number from elsewhere. Our Kenyan hosts provided superb organization and facilities, and the scientific programme was of the highest standard. The only disappointing aspect was that our South African colleagues did not receive their visas in time to attend. The Assembly also showed the effectiveness of the three sponsoring bodies, IASPEI, Unesco and ICL in working together to provide a much more successful meeting than any could have arranged by themselves. We hope that this precedent will be able to be followed with Regional Assemblies in other areas of the world. We are also grateful to organizations in Sweden, Germany and Italy for sponsoring the attendance of particular African scientists.

This Newsletter also gives more detailed information about the programme for the General Assembly to be held in Vienna in 1991 with IUGG.



R D Adams
Secretary-General

EUROPEAN SEISMOLOGICAL COMMISSION

The 22nd General Assembly of the European Seismological Commission was held in Barcelona, Spain, 17 - 22 September 1990.

The following officers were elected:

President: Dr L Waniek (Czechoslovakia)
Vice-Presidents: Prof. G Nolet (Netherlands)
Prof. G A Sobolev (USSR)
Secretary-General: Dr D Mayer-Rosa (Switzerland)

The 23rd General Assembly will be held in 1992 at Prague, Czechoslovakia.

IASPEI/UNESCO/ICL REGIONAL SEISMOLOGICAL ASSEMBLY IN
AFRICA, NAIROBI, KENYA. 22-29 AUGUST, 1990

The Regional Seismological Assembly in Africa was held at the Kenyatta International Conference Centre, Nairobi, Kenya, 22-29 August, 1990. There were 132 scientific registrants, 63 from a total of 20 African countries and 69 from 18 countries outside Africa.

OPENING CEREMONY, 23 AUGUST 1990

This ceremony was chaired by Professor I. O. Nyambok, Chairman of the Local Organizing Committee, who opened proceedings at 1000.

Professor Nyambok first welcomed the Guest of Honour, the Honourable Dr N Mungai, Minister for Environment and Natural Resources, and other distinguished guests, and summarised the content of the eight main scientific themes around which the scientific programme was arranged.

Dr H Driessle of the Regional Office for Science and Technology in Africa then spoke on behalf of Unesco. As an example of the practical importance of earth science studies in Africa, he mentioned the compilation of a hydrogeological map to aid in the development of water resources for Kenya and neighbouring countries.

The International Lithosphere Programme was represented by Professor K. Fuchs, who reviewed its goals and achievements in particular its involvement in Global Geoscience Transect Projects which were also being undertaken in Africa.

The President of IASPEI, Prof. St. Mueller, then welcomed guests and participants on behalf of that organization. He pointed out the scope for developing earth studies in the African continent, and mentioned the various international scientific programmes to which African earth scientists could make a valuable contribution. Prof. Mueller also expressed IASPEI's support for the creation of a new, multidisciplinary organization for earth sciences in Africa.

The Chairman then introduced the Guest of Honour the Honourable Dr. N. Mungai, who read an address by His Excellency the Honourable Daniel T. Arap Moi, President of the Republic of Kenya, and Commander-in-Chief of the Armed Forces. Dr Mungai first paid tribute to the President for his personal national and international commitment to the protection of the environment. In his message, the President stressed the need to address the problems of all natural disasters including those specific geological hazards that would be discussed at this Assembly. He pointed out that 80,000 people had been killed world-wide by natural disasters in the last decade, of which about one tenth were in Africa. He mentioned that Kenya was already working towards the establishment of a national seismograph network to help understand earthquake hazard in that country, and urged all governments and peoples to work together in disaster reduction.

The Chairman closed the meeting at 1115.

OPENING PLENARY SESSION, 23 AUGUST 1990

Present: Prof. St. Mueller (President) in the Chair and about 100 delegates and guests.

The President opened the meeting at 1140 and welcomed participants to this Second Regional Assembly of the Association. He then asked those present to stand in memory of colleagues who had died since the last Assembly in Istanbul in 1989. These include:

Prof. V. I. Bune	(USSR)
Dr R. E. Hansen	(USA)
Mr J-M Van Gils	(Belgium)

The President then reported on his activities on behalf of the Association since the last Assembly. These included a meeting of the IUGG Bureau and Association Presidents, held in Washington, D.C. in May 1990, to discuss the long-term aims and plans of the Union. A document is being produced which will be presented to the Union at the General Assembly in Vienna in 1991.

Prof. Mueller also reported that the Association had established a committee, under the chairmanship of Professor B A Bolt, to plan and coordinate its activities relating to the International Decade for Natural Disaster Reduction. This group will have its first meeting in Lisbon immediately after this Assembly. He also referred to IASPEI's activities related to the International Geosphere-Biosphere Project, which included a European-based interest in seismological aspects of volcanic eruptions, which he hoped might become a joint venture with IAVCEI.

The Secretary-General then briefly mentioned some other features of IASPEI activities. Since the 1989 Assembly the plans for the present Regional Assembly have been finalised with the Local Organizing Committee, in consultation with Unesco and ICL. He also expressed our thanks to other agencies who had provided funds to help participants from Africa to attend.

Dr Adams also reported that the main details of the programme for the 26th General Assembly in Vienna in 1991 had now been established. In addition to co-sponsoring nine IUGG symposia, IASPEI has arranged eleven symposia in its own fields of interest and many workshops and working group meetings.

PUBLICATIONS All publications of IASPEI proceedings from the 1987 General Assembly have now appeared and volumes from the 1989 Assembly are in preparation. The book "Anatomy of Seismograms" edited by Professor O Kulhanek has now been published, arising from the work of a joint IASPEI/Unesco Working Group. A follow-up volume for digital records is now being prepared. Work on the publication of IASPEI Software continues, and Volume 2 will be published within the next few months.

Dr M Hashizume advised that Unesco still had a few copies of "Anatomy of Seismograms" and Volume 1 of IASPEI Software, which could be made available on request to suitable institutions in developing countries.

The question of publication of proceedings from this Assembly was raised, and Prof. I O Nyambok said that the Kenyan authorities would prefer to have the proceedings in a single volume. This question would be raised with Elsevier.

COMMISSION CHANGES Early in 1990, Dr M J Berry, Chairman of the Commission on Earthquake Hazard and Prediction, resigned to take up his appointment as Secretary-General of ICL. He has been succeeded in the Commission by Prof. G A Sobolev of the Soviet Union.

FINANCE The Secretary-General reported that this was a difficult period for the Association, with major Assemblies in three consecutive years. Our activities continue to be helped by grants from the US National Academy of Sciences, through ICSU, to support programmes approved by Unesco. In 1990 we have also received for the first time substantial royalties from publication of proceedings from previous Assemblies. In 1990 the Association is spending about \$20,000 supporting general commission activities and \$30,000 on the Regional Assembly. We hope to end 1990 with a cash balance of about \$20,000 to be used towards financing the 1991 Vienna Assembly.

INTERNATIONAL SEISMOLOGICAL OBSERVING PERIOD Dr Engdahl explained the concept of ISOP to extend the reporting of later seismic phases to help elucidate earth structure. An Executive Committee had been set up at the 1989 Assembly and a full-time ISOP coordinator is being employed with funds from the US Geological Survey. Dr Engdahl stressed the relevance of digital techniques to ISOP and the part that could be played by developing countries. Opportunity was being taken to make an ISOP presentation at a CERESIS workshop in Lima later in 1990.

Professor R M Kebeasy said he would be glad to include an ISOP presentation in the Training Seminar for African and Arab Seismological Observers being held in Egypt in February 1991.

RESOLUTIONS COMMITTEE

Prof. Mueller announced that he had appointed the following Resolutions Committee, comprising one person from each of the three main sponsors and the host country:

Dr E R Engdahl (Chairman)
Dr M J Berry

Dr M Hashizume
Prof. I O Nyambok

OTHER BUSINESS Dr H K Gupta asked about progress of the IASPEI group evaluating earthquake predictions. This Working Group of the Commission on Earthquake Hazard and Prediction, chaired by Dr Max Wyss, is continuing its work and will next report during the 1991 Vienna Assembly.

There being no further business the President closed the meeting at 1230.

SCIENTIFIC PROGRAMME

The scientific sessions of the Assembly were held under the following themes.

- 22 Aug Geothermal Studies and Heat Flow. Convenors: P Morgan (USA), P S Bhogal (Kenya)
- 22-24 Aug Earthquake Disaster Assessment and Mitigation in Africa. Convenors: C Weber (France), L M Asfaw (Ethiopia), G W Stuart (UK)
- 23-24 Aug Global Geoscience Transects in Africa. Convenors: J Sougy (France), J W H Monger (Canada), B T Rumvegeri (Zaire)
- 24, 27 Aug African Rift Systems - Structure and Tectonics. Convenors: C Prodehl (FRG), M A Khan (UK), B R Rosendahl (USA)
- 24, 27 Aug Induced Seismicity - Mining and Reservoir. Convenors: H K Gupta (India), R M Kebeasy (Egypt), A J Kijko (Poland)
- 27-28 Aug Seismological Instrumentation and Data Analysis in Africa. Convenors: S E Pirhonen (Finland), D Giardini (Italy), J H Kanyanta (Kenya)
- 28 Aug Africa from Above and Below - Satellite Imagery and Lithosphere Probing. Convenors: J D Fairhead (UK), M Fofana (Ivory Coast), O Haddiouché (FRG).
- 28-29 Aug Volcanism and Associated Seismicity in Africa. Convenors: H Hamaguchi (Japan), B Chouet (USA), N Zana (Zaire)

Convenors' summaries will be submitted to the IUGG Chronicle, and a selection of papers will appear in Tectonophysics.

Scientific Excursions

- 25 Aug Lake Magadi (soda lake, faulted terrain, hot springs)
25 Aug Olkaria Geothermal Site (volcanic and faulted terrain,
geothermal power plant)
30 - 31 Aug Mt. Kenya - Middle Tana (volcanic terrain, hydro-electric
dams)
30 Aug-1 Sep Western Kenya and Rift Valley (Nakuru, Eldoret, the Turkwel
hydro-electric site, Lakes Baringo and Bogoria)

CLOSING PLENARY SESSION, 29 AUGUST 1990

Present: Prof. St. Mueller (President) in the chair and about 120 delegates and guests.

The President opened the meeting at 1400, expressed satisfaction at the obvious success of the Assembly and thanked all those concerned. He particularly noted the formation of the International Commission on Earth Sciences in Africa, and reported that at the initial meeting of its Bureau, the following officers were appointed:

President: Prof. I O Nyambok (Kenya)
Vice-President: Prof. E Oni (Nigeria)
Secretary: Prof. A B Kampunzu (Zaire)
Treasurer: Prof. R M Kebeasy (Egypt)

Professor Oni mentioned that there was also a move to establish an African Geophysical Union, which would be comprised of representatives of national geophysical societies.

The publication of proceedings of the present Assembly was discussed, and it was announced that IASPEI would approach Elsevier with a view to their publishing the proceedings in a single volume.

The Secretary-General then reviewed the scientific programme already established for the Vienna General Assembly in 1991 and reminded those eligible of the availability of GEOHOST grants from the Local Organizing Committee.

The Chairman of the Resolutions Committee, Dr E R Engdahl, then moved seven resolutions, which were accepted without modification.

The President then thanked those present, and closed the meeting at 1430.

CLOSING CEREMONY, 29 AUGUST 1990

Professor I O Nyambok, Chairman of the Local Organizing Committee, presided over the Closing Ceremony, which began at 1500.

After a brief introduction in which he thanked the Guest of Honour, the Honourable Dr N Mungai, for his presence he called on Dr R D Adams, Secretary-General of IASPEI, to speak on behalf of the sponsors of the Assembly. Dr Adams stressed the cooperation that was necessary in all earth sciences and particularly seismology, and pointed out that this Assembly had been brought about by the fruitful cooperation of the three sponsoring bodies, IASPEI, Unesco and ICL.

Dr Mungai then delivered his closing address in which he referred to the topics of the various themes of the Assembly, and stressed that his government would do all it could to help implement the recommendations.

Finally, Prof. R M Kebeasy moved a vote of thanks to all concerned in the arrangements for the Assembly, with particular reference to the Local Organizing Committee and the Government of the Republic of Kenya.

RESOLUTIONS ADOPTED BY IASPEI/UNESCO/ICL REGIONAL SEISMOLOGICAL ASSEMBLY IN AFRICA, NAIROBI, KENYA, 29 AUGUST 1990

1. The Assembly,
Recognising the need for an umbrella, continent-wide organization to facilitate and coordinate geoscientific work in Africa and to link with international organizations in earth sciences,
Commends the formation of the International Commission for Earth Sciences in Africa (ICESA).
2. The Assembly,
Realizing the urgent need to expand and facilitate seismological research and recording networks, and to reduce the threat of seismic disaster in Africa,
Recommends the establishment and reinforcement of national and regional seismological networks, including at least one broadband station for ISOP-related analysis in each country and strong-motion seismographs as needed, and
Further Recommends the establishment of national and regional data centres such as proposed under the Southern African Development Coordination Conference Seismic Project, and
Also Urges seismological stations to report their data to international centres, such as the National Earthquake Information Center and the International Seismological Centre, for the accurate determination of earthquake parameters and for international data exchange.
3. The Assembly,
Realizing the need to store fresh water in artificial reservoirs for irrigation, drinking and electricity generation, and
Recognizing the importance of understanding the nature of induced earthquakes near these reservoirs,
Strongly Recommends monitoring of the seismic events before, during and after reservoir impoundment.
4. The Assembly,
Recognising that geothermal data is vital for basic and applied geophysical and geological studies and that heat flow density is an essential parameter for assessment of the deep temperature distribution, yet has very uneven coverage on the African continent,
Encourages expansion of geothermal studies and a programme for measurement of temperatures in exploration drill holes in Africa.
5. The Assembly,
Considering the importance of the initiative by the International Lithosphere Programme, the International Association of Seismology and Physics of the Earth's Interior, World Data Center A for Seismology and World Data Center A for Solid Earth Geophysics to enhance Earth science research and educational capabilities in developing nations through the use of compact disk technology, and
Recognizing the success of the pilot project in Morocco and the prospect of continuing this programme in other African countries,
Appeals to Unesco and other United Nations agencies to continue and expand their support for this programme.

6. The Assembly,

Acknowledging the initiative by the IASPEI/Unesco/ICL Working Group on Seismology and Related Sciences in Africa in organizing this first Regional Seismological Assembly in Africa, and Realizing that this Assembly has provided an unprecedented opportunity for African Earth scientists and their counterparts from other parts of the world to interact and exchange scientific information, particularly during the first year of the International Decade for Natural Disaster Reduction, Strongly Recommends that similar assemblies be held in Africa at regular intervals.

7. Participants,

Recognizing the remarkable success of this Assembly, Express their profound thanks and gratitude to the Government of Kenya for hosting the meeting, and Congratulate the Local Organizing Committee and co-workers for the excellent preparations, the superb scientific programme, the magnificent facilities provided and for all those efforts which resulted in a very high level of scientific exchange.

INTERNATIONAL COMMISSION FOR EARTH SCIENCES IN AFRICA

The International Commission for Earth Sciences in Africa (ICESA) was set up during the Regional Seismological Assembly in Africa, with the following officers:

Chairman:	Prof. I O Nyambok (Kenya)
Vice-Chairman:	Prof. E Oni (Nigeria)
Secretary-General:	Prof. A B Kampunzu (Zaire)
Treasurer:	Prof. R M Kebeasy (Egypt)

The objectives of the new organization are:

1. To facilitate and coordinate geoscientific work in Africa.
2. To assist and coordinate the exchange of scientific personnel among African countries.
3. To provide the means for exchange of scientific information and data such as newsletters and telefax.
4. To undertake the organization of meetings/seminars for scientists to interact and exchange ideas.
5. To facilitate collaboration with similar organizations working in the field of earth sciences.
6. To initiate programmes of training for African scientists and technicians in earth sciences.

The Commission intends initially to focus on two core scientific projects: 1. Rift Systems in Africa, 2. African-Eurasian Plate Interactions. To help in these there will be three Working Groups:

- i) Working Group on Precambrian evolution and metallogenic provinces in Africa.
- ii) Working Group on Geoscientific data acquisition and exchange of information (data bank).
- iii) Working Group on Regional Seismological Networks.

ICESA will be an independent body, but it hopes to have strong links with IASPEI, the International Lithosphere Programme and the African Academy of Sciences. At its inaugural meeting, the President of IASPEI, Prof. St. Mueller, wished ICESA well on behalf of the Association, and said that it would be welcome to apply for Commission status in IASPEI if it wished.

26th GENERAL ASSEMBLY, VIENNA; 11-24 AUGUST 1991

IASPEI will hold its 26th General Assembly in conjunction with the XX General Assembly of IUGG, 11-24 August 1991. As well as participating in Union activities, IASPEI will be arranging its own programme of scientific and business sessions.

Please note that the issue of all circulars and local arrangements, including registration and accommodation, is being handled by:

Local Organizing Committee IUGG 91
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Tel: +43 222 364453
Fax: +43 222 369 1233
Telex: 131837 METEOR

The first and second circulars with preliminary information have already been issued, and the Third Circular with full details of sessions, convenors and instructions for submitting abstracts will be distributed from Vienna in November. Those who have not already requested these from the Local Committee should do so.

Registration Fee This will be announced in the Third Circular, but preliminary estimates are as follows, in Austrian schillings:

	Before 1 March	Before 1 July	At Assembly
Delegates	2,650	3,350	3,650
Young scientist	600	1,500	1,700
Accompanying person	1,000	1,200	1,400

The present exchange rate is about US \$1 = 11 schillings

Abstracts Instructions for the preparation of abstracts will also be in the Third Circular. The deadline for submission to convenors is likely to be 28 February 1991. Please note that abstracts should be sent to convenors and the Local Organizing Committee and not to the IASPEI Secretariat.

Travel Grants As is usual in IASPEI, the provision of travel grants will be made through convenors of sessions, and scientists wishing to receive support should apply to convenors when they submit abstracts. The total amount available for each session will not be known until early in 1991, when the Association learns how much support it will receive from funding agencies. Please remember that our resources are very small, and only in exceptional circumstances will it be possible to offer full funding to any participant.

Scientists who are successful in obtaining GEOHOST grants from the Local Committee should let me know directly if they need further support.

Business Sessions IASPEI will hold two plenary sessions, on 12 and 21 August. The agendas will be announced later, but if any National Correspondents wish to have any particular matters raised, please let me know. Elections will take place for new officers of the Association. A Nominating Committee has already been appointed and suggestions may be made to the Committee at the Assembly or beforehand. The Chairman is: Prof. Z. Suzuki, 9-11-18 Hino, Konan-ku, Yokohama 233, Japan, and other members are: Prof. H Berckhemer (Germany), Prof. B A Bolt (USA), Prof. A D Gvishiani (USSR) and Prof. E. Kausel (Chile).

SCIENTIFIC SESSIONS (WITH CONVENORS)

Plenary Sessions

- First Plenary Session 12 Aug. a.m.
Second Plenary Session 21 Aug. ev.

IASPEI-Related IUGG Symposia

- U1 Interrelation Between Geophysical Structures and Processes
(Prof. K Aki) 14 Aug. a.m., p.m., 15 Aug. p.m.
U3 Major Puzzling Problems or Paradoxes in Contemporary Geophysics
(Dr E Nyland) 13 Aug. a.m., p.m.
U4 Non-linear Dynamics and Predictability of Critical Geophysical
Phenomena (Dr J Lomnitz-Adler) 20 Aug. a.m., p.m., 21 Aug. a.m., p.m.
U5 Application of Gravimetry and Space Techniques to Geodynamics and Ocean
Dynamics (Prof. C Froidevaux) 14 Aug. a.m., p.m., 15 Aug. a.m.
U6 Dynamics of the Earth's Deep Interior and Earth Rotation
(Prof. K Lambeck) 19 Aug. a.m., p.m.
U8 Water and Ice as Geophysical Agents
(Prof. A M Nur) 22 Aug. a.m., p.m., 23 Aug. a.m., p.m.
U10 The Application of Topographic Data Bases to Geodynamic Prediction
and Interpretation (Dr Y Ricard) 16 Aug. a.m., p.m.
U11 Structure Beneath Marginal Sea Basins
(Prof. H Shimamura) 20 Aug. a.m., p.m.
U12 Chemical Evolution of the Earth and Planets
(Prof. R Jeanloz) 22 Aug. a.m., p.m.

IASPEI Symposia

- S1 Earthquake Hazard and Risk
(Mr P W Basham) 13 Aug. a.m., p.m., 14 Aug. a.m.
S2 Progress in the Seismic Interpretation of Complex Structures
(Prof. B L N Kennett) 22 Aug. a.m., p.m., 23 Aug. a.m., p.m.
S3 Plate Tectonic Signatures in the Continental Lithosphere
(Dr A G Green) 13 Aug. a.m., p.m., 14 Aug. a.m.
S4 Shear-Waves and Shear Wave Splitting
(Prof. J P Montagner) 21 Aug. a.m., p.m.
S5 Earthquake Sources (Prof. J L Nabelek) 14 Aug. a.m., p.m.
S6 Lateral Heterogeneity and Earthquake Location
(Dr D Giardini) 16 Aug. a.m., p.m.
S7 Application of Strong Motion Records to Seismological Problems
(Prof. B A Bolt) 16 Aug. a.m., p.m.
S8 Heat Flow, Rock Mechanics and Seismicity
(Prof. G Ranalli) 19 Aug. a.m., p.m.
S9 Physical Processes in the Deformation of the Lithosphere:
Observations, Laboratory and Numerical Modelling
(Prof. B H Hager) 15 Aug. a.m., p.m., 16 Aug. a.m.
S10 Physical Properties of the Earth's Interior: Mantle to Core
(Prof. T J Ahrens) 20 Aug. a.m., p.m.
S11 Tsunami Disaster Reduction (Dr E N Bernard) 19 Aug. a.m., p.m.

IASPEI Workshops

- W1 Global and Local Geophysical Networks
(Prof. A V Nikolaev) 20 Aug. a.m.
W2 Structured Databases in Solid Earth Geophysics
(Dr J Bonnin) 20 Aug. p.m.
W3 Estimation of Earthquake Size (Prof. S J Duda) 19 Aug. p.m.
W4 Analysis of Digital Seismograms (Dr A Plesinger) 19 Aug. a.m.
W5 Applications of Personal Computers in Geophysics (Dr W H K Lee)
19 Aug. p.m. (oral), 20 Aug. a.m., p.m., ev. (demonstration)
W6 Evaluation of Methods of Interpretation of Heat Flow Data
(Prof. A E Beck) 20 Aug. a.m.

- W7 Climate Change Recorded in Subsurface Temperatures
(Prof. H N Pollack) 20 Aug. p.m.
- W8 World-wide Assessment of Seismic Hazard Techniques
(Dr R K McGuire) 15 Aug. a.m., p.m.
- W9 Earthquake Risk (Dr K V Steinbrugge) 14 Aug. p.m.
- W10 Electrical and Seismic Properties of the Lithosphere and their
Interpretation in Terms of Physical State and Petrology
(Dr I S Sacks) 19 Aug. a.m., p.m.
- W11 Electromagnetic Methods of Natural Disaster Warning
(Dr M B Gokhberg) 22 Aug. p.m.
- W12 International Seismological Observing Period
(Dr E R Engdahl) 21 Aug. a.m.
- W13 Global Geoscience Transects Project (Dr J W Monger) 14 Aug. p.m.
- W14 Exploring the Continental Crust by Drilling (Dr S L Klemperer)
16 Aug. a.m., p.m.

IASPEI Working Groups

- WG1 IASPEI/Unesco/ICL Working Group on Seismology and Related
Sciences in Africa (Dr H K Gupta) 22 Aug. a.m., p.m.
- WG2 Seismic Regionalization (Mr J B Young) 19 Aug. a.m.
- WG3 Modelling the Earthquake Process (Prof. C H Scholz) 15 Aug. p.m.
- WG4 Case Histories of Earthquake Precursors
(Dr M Wyss) 15 Aug. a.m.
- WG5 Time-Dependent Earthquake Hazard
(Dr J Lomnitz-Adler) 16 Aug. a.m.
- WG6 Seismicity Patterns (Dr K Hamada) 14 Aug. p.m.
- WG7 Crustal Deformation (Prof. J Zschau) 16 Aug. p.m.
- WG8 Earthquake Alarms Based on Combined Parameters
(Prof. G A Sobolev) 16 Aug. p.m.

IASPEI Commissions

- C1 Commission on Controlled Source Seismology 14 Aug. ev.
- C2 Commission on Earthquake Hazard and Prediction 16 Aug. ev.
- C3 Commission on Geodynamics and Tectonophysics 15 Aug. ev.
- C4 International Heat Flow Commission 19 Aug. ev.
- C5 Commission on Physical Properties of Material
of the Earth's Interior 20 Aug. ev.
- C6 Commission on Practice 21 Aug. p.m.
- C7 Commission on Strong Motion Seismology 15 Aug. ev.
- C8 Commission on Wave Propagation 16 Aug. ev.
- C9 European Seismological Commission 13 Aug. ev.
- C10 Federation of Digital Broad Band Seismograph
Networks 15 Aug. a.m., p.m., 19 Aug. p.m.

Social Events

- IUGG Reception 12 Aug. ev
- IASPEI Dinner 22 Aug. ev

AUGUST 1991

	Monday 12			Tuesday 13			Wednesday 14			Thursday 15			Friday 16			Monday 19			Tuesday 20			Wednesday 21			Thursday 22			Friday 23		
	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev	am	pm	ev			
U1 Geophysical Structures		U																												
U3 Paradoxes in Contemp. Geophysics		N																												
U4 Non-linear Dynamics		I																												
U5 Space Techniques in Geodynamics		O																												
U6 Dynamics of Earth's Deep Interior		N	S																											
U8 Water and Ice as Geophysical Agents		P	O																											
U10 Topographic Data Bases		L	C																											
U11 Marginal Sea Basins		E	I																											
U12 Chemical Evolution		N	A																											
S1 Hazard and Risk		R	L																											
S2 Complex Structures	A																													
S3 Signatures in Lith.	S																													
S4 Shear Waves	O																													
S5 E/q Sources	C																													
S6 Lat. Heterogeneity	I																													
S7 Strong Motion	A																													
S8 Heat Flow etc.	T																													
S9 Lith. Deformation	I																													
S10 Physical Properties	O																													
S11 Tsunamis	N																													
Workshops							9		8	8					4, 10	3, 5, 10		1, 5, 6	2, 5, 7	5		12				11				
Working Groups							6		4	3		5	7, 8		2										1	1				
Commissions							9		1	10	10	3, 7		2, 8	10	4				5		6								

CONVENORS OF PRINCIPAL IASPEI SESSIONS

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IASPEI PROGRAMME FOR THE INTERNATIONAL DECADE OF NATURAL
DISASTER REDUCTION

Despite improvements in our knowledge of earthquake sources, seismic ground motions and seismic resistant design of man-made structures, earthquakes continue to produce great life and economic loss. As IASPEI's contribution to lowering these earthquake risks, a Committee for the IDNDR was established at the Istanbul Assembly. The Committee met on August 31 and September 1 1990 in Lisbon, Portugal to construct an earthquake hazards reduction programme for adoption by IASPEI at its 1991 Assembly in Vienna. The working meeting was hosted by Dr. C. Oliveira at the Laboratorio Nacional de Engenharia Civil and was supported by IASPEI, Unesco and private funds. Participants were B. A. Bolt (Chairman), M. Hazhisume, E. Kausel, V. Karnik, S. Mueller, C. Oliveira, M. Ohtake, G. A. Sobolev and Li Li Xie.

After considerable discussion of present earthquake-related programmes already developed by international and national IDNDR groups and associations, the committee defined the main scientific components of the earthquake hazard and set down the specific goals appropriate to IASPEI. In addition to further research, increased effort is needed on transfer of seismological knowledge to applications and policy. The Committee developed a number of major proposals for an IASPEI programme and decided on enabling recommendations. In particular, it is recommended that the IASPEI effort be carried out mainly by the existing Commissions enhanced by special workshops, lectures, publications and sponsored research.

A report of the IASPEI program is being prepared, entitled: "Minimizing Earthquake Vulnerability", and will be widely distributed.

PUBLICATIONS

Elsevier have agreed to publish the proceedings of the Regional Seismological Assembly in Africa as a single volume of Tectonophysics. Because of pressure on space, only principal papers will be published in full, and other presentations will have extended abstracts. The editorial board is: Dr. C. B. Ebinger (Dept. of Earth Sciences, University of Leeds, Leeds LS2 9JT, U.K.), Editor-in-Chief, Dr. H. K. Gupta and Prof. I. O. Nyambok.

The final volume of proceedings from the Vancouver Assembly has now appeared. It is "Microseisms Caused by Factors Internal and External to the Earth's Crust", edited by E. Hjortenberg and A. V. Nikolaev, and is in Physics of the Earth and Planetary Interiors, Vol.63, Nos. 3-4, 1990.

Volume 2 of the IASPEI Software Library has now been published. It comprises a "Toolbox for Plotting Seismic and Other Data". It is available from the Seismological Society of America at a cost of US \$250. The source code package is also available at the same cost.

FORTHCOMING MEETINGS

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

- 1990 Nov 19-22 EARTHQUAKE SOURCE PHYSICS AND EARTHQUAKE PRECURSORS,
Tokyo, JAPAN
Dr M Ohnaka, ERI, University of Tokyo, Yayoi, Bunkyo-ku,
Tokyo, 113, JAPAN
- 1990 Nov 26-30 ESC WORKSHOP : CHARACTERISTIC EARTHQUAKE AND SEISMIC HAZARD
Liblice, CZECHOSLOVAKIA
Geophysical Institute, Bocni II, cp 1401, 14131 Prague,
Sporilov, CZECHOSLOVAKIA
- 1991 Mar 11-15 GEOTECHNICAL EARTHQUAKE ENGINEERING AND SOIL DYNAMICS
St. Louis, Missouri, USA
Engineering Continuing Education, University of Missouri-
Rolla, Rolla, MO 65401-0249, USA
- 1991 Apr 10-11 CAUSES AND CONSEQUENCES OF STRESS IN THE LITHOSPHERE
London, U.K.
Scientific Meetings Secretary, Royal Society, 6 Carlton
House Terrace, London SW1Y 5AG, U.K.
- 1991 Apr 21-27 GEOPHYSICAL HAZARDS IN DEVELOPING COUNTRIES AND THEIR
ENVIRONMENTAL IMPACTS
Cairo, EGYPT
Dr T S Murty, Inst. of Ocean Sciences, Box 6000,
Sidney, BC, CANADA V84 4B2
- 1991 Aug 11-24 XX GENERAL ASSEMBLY IUGG
Vienna, AUSTRIA
IUGG Committee, ZAMG, Hohe Warte 38, A-1190 Vienna, 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
- 1992 Jul 19-25 10th WORLD CONFERENCE ON EARTHQUAKE ENGINEERING
Madrid, SPAIN
10WCEE, C/o Tilesa, Londres 39-1°B, 28028 Madrid, SPAIN
- 1994 Jan 27th GENERAL ASSEMBLY, IASPEI
Wellington, NEW ZEALAND