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and Physics of the Earth’s Interior

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NEWSLETTER NO. 7 NOVEMBER 1982

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

Once again this issue of the Newsletter is mainly devoted to details of the General Assembly to be held in Hamburg next August. There is some repetition of information in previous Newsletters, but this is done for the sake of completeness.

I would remind National Correspondents that the Newsletter is not circulated widely to individuals, and ask them to ensure that the information it contains reaches all those in their own countries who may be interested in it.

With best wishes for a successful year in 1983.

R D Adams
Secretary-General

INTERNATIONAL SYMPOSIUM ON CONTINENTAL SEISMICITY
AND EARTHQUAKE PREDICTION 8-19 SEP. 1982

This was the first international meeting on earthquake prediction to be held in China. There were 104 participants, from 23 countries, and about 75 papers were given. IASPEI was represented by Prof Bolt, President, and Prof Suzuki, Vice-President. The symposium was arranged by the Seismological Society of China, and also sponsored by Unesco, UNEP, UNDRO and IASPEI.

Reporting on recent developments in China, Prof Ma Xingyuan advised that there are now 493 professional earthquake observation stations in China and more than 6,000 amateur stations. All provinces, municipalities and autonomous regions now have special earthquake departments. The need for this is demonstrated by the fact that since 1177 BC about 3,200 devastating earthquakes are on record. In common with other continental regions, earthquakes in China arise from complex distributed sources with multiple ruptures, again indicating that a San Andreas type of simple rupture is not a universal prototype of earthquake source.

Among other reports on continental seismicity, Prof K. Shimazaki gave evidence that stresses are transmitted far into the mid-plate region, and Prof P. Tapponnier (France) showed that the deformation of the Asian land mass was caused by penetration of the Indian block. Dr R. Wallace (USA) reported that fault activity shifted from some belts and did not return for perhaps thousands of years. Experiments on large granite and basalt blocks reported by Prof G. Sobolev (USSR) suggested that there are different types of precursors, while from China Dr Ding Guoyu discussed recurring intra-continental earthquakes from evidence of fault slip at paleo-earthquakes. Prof K. Mogi (Japan) showed that the vertical movement reported before the 1964 Niigata earthquake can be re-analysed to reduce its predictive associations.

The symposium included a visit to the site of the Tangshan earthquake, and concluded with study tours to earthquake sites at Haicheng, Tonghai and Diexi.
EUROPEAN SEISMOLOGICAL COMMISSION

The ESC held a very successful meeting at Leeds, UK, 23-27 August, 1982, in conjunction with the European Geophysical Society. As well as meetings of subcommissions, lively sessions were held in Seismotectonics, Lateral Heterogeneity in the Mantle, Earthquake Prediction, Engineering Seismology and Filtering Analysis. The IASPEI Commission on Controlled Source Seismology arranged a poster session on "Seismic Studies of the Crust and Upper Mantle".

The new officers of ESC are:

President: Prof H. Stiller (GDR)
Vice-Presidents: Dr E. Bisztricsany (Hungary)
Prof A. Udias (Spain)
Secretary-General: Mr. J. M. Van Gils (Belgium)
Assistant Secretary-General: Dr L. Waniek (Czechoslovakia)

The next meeting of ESC is scheduled for Baku in the Soviet Union, and is likely to be held in the first week of October, 1984.

LATERAL HETEROGENEITY IN THE MANTLE

This Symposium, held at the European Seismological Commission meeting at Leeds in August 1982, was jointly sponsored by ESC and the Commission on Physical Properties of Material of the Earth's Interior, with financial assistance from Unesco. The meeting continued over two days and attracted 37 papers.

For such a broad topic, it was a little disappointing that there were not more observationally based papers submitted by non-seismologists. Several speakers commented on the tantalising fact that various techniques for inverting observations indicated deep physical and chemical inhomogeneity, but could not localise it. It seems that what may need to be used are some of the less developed techniques of observation, that could be better suited than the classical methods of gravity and seismology to resolve the ambiguities of lateral heterogeneity associated with convection. It may well be that no consensus or consistency will be possible until theoreticians can provide some sort of model of the kind of lateral heterogeneity that is now likely to exist, although this symposium did not supply any new evidence that many convection theorists are yet willing or able to think beyond spherically symmetric olivine models of the mantle.

The seismological papers were chiefly concerned with lateral differences in the vicinity of the mantle transition zone and the core mantle boundary - perhaps the most likely sites of laterally changing thermal boundary layers. There were important contributions from G. Masters (USA) and I. S. Sacks (USA) on these respective topics, and N. I. Pavlenkova (USSR) presented a good survey of differential travel time data that is relevant to the upper mantle structure under North Eurasia. R. G. Roberts (UK) gave a survey of magnetic and magneto-telluric indication studies.

Publication of the symposium papers is planned.

T. J. Ahrens, D. C. Tozer (Convenors)

BIRTHDAY GREETINGS

The Association sends its best wishes to Professor Kiyoo Wadati, who celebrated his 80th birthday on 8 September. Prof Wadati is, however, by no means our most senior past President, as Sir Harold Jeffreys will be 92 next April.
DIRECTORY OF WORLD DIGITAL SEISMIC STATIONS

This comprehensive volume has been issued as Report SE-32 from World Data Center A for Solid Earth Geophysics, Boulder, Colorado. It contains full technical details of:

12 Seismic Research Observatories (SRO)
5 Modified High-Gain Long-Period Stations (ASRO)
4 High-Gain Long-Period Stations (HGLP)
19 Digital World-Wide Standardized Seismograph Network Station (DWWSSN)
14 Arrays
11 Telemetered Networks
18 International Deployment of Accelerometers Stations (IDA)
5 Regional Seismic Test Networks (RSTN)
7 Other Digital Stations

Not all stations are yet operative, and as expected the map shows a very dense distribution of stations in Europe, and to a lesser extent in North America. Few areas of the world are not covered to some extent, however.

COPYING HISTORICAL SEISMOGRAMS

A further Working Group meeting on this topic is to be held in Tokyo 20–22 December, 1982, following the successful joint Unesco/IASPEI meeting at the 1981 General Assembly in Canada. The Tokyo meeting will discuss requirements for the South East Asian region, and participants are expected from many countries including Australia, China, Hong Kong, India, Indonesia and Philippines, as well as from Japan, the Soviet Union, and representatives from international seismological agencies.

NEW PUBLICATIONS

The former "Annales de Géophysique" and Annali di Geofisica" are being replaced by a new journal "Annales Geophysicae", being published by the European Geophysical Society. There will be six issues a year, starting from January 1983, and the journal will contain a letter section, research papers, book reviews and announcements. Subscription enquiries should be made to:

Gauthier-Villars, 17, rue Remy Dumoncel, BP 150, 75661 Paris, FRANCE

and editorial matters to:

Prof St. Müller, ETH, Hönggerberg, CH-8093 Zürich, SWITZERLAND.


UNESCO APPOINTMENT

Dr Michio Hashizume has been appointed to head the Natural Hazards Unit in the Division of Earth Sciences, Unesco, Paris. We wish him well in his new appointment, and look forward to further useful collaboration between Unesco and IASPEI.
FORTHCOMING MEETINGS

The following is a selection of meetings from 1983 in the field of interest of the Association.

1983 Mar 14-19 SYMPOSIUM ON DIGITAL DATA - ACQUISITION AND PROCESSING IN SEISMOLOGY
Thuringia, GDR
Academy of Sciences of GDR
Dr C Teupser, Zentralinstitut für Physik der Erde,
Burgweg 11, PF106, 6900 Jena, GDR

1983 Mar 28-31 2nd Meeting EUROPEAN UNION OF GEOSCIENCES
Strasbourg, France
EUG
EUG Organizing Committee, Max-Planck-
Institut fuer Chemie, Saarstrasse 23,
D-6500 Mainz, FRG

1983 May 10-12 SOUTH PACIFIC REGIONAL CONFERENCE ON EARTHQUAKE ENGINEERING
Wellington, New Zealand
NZ National Society for Earthquake Engineering
NZ Nat Soc for Earthquake Engineering, Box 243,
Wellington, NEW ZEALAND

1983 Aug 15-27 XVIII GENERAL ASSEMBLY OF IUGG
Hamburg, FRG
International Union of Geodesy and Geophysics
Local Organizing Committee, IUGG,
Postfach 302360, 2000 Hamburg 36, FRG

1983 Aug 23-27 SYMPOSIUM ON 100-YEAR DEVELOPMENT OF KRAKATAU AND ITS SURROUNDINGS
Jakarta, Indonesia
Indonesian Institute of Sciences
LIPI, Jalan Gatot Subroto, 250 Jakarta Pusat, Jakarta, INDONESIA

1984 Feb 9-14 INTERNATIONAL SYMPOSIUM ON RECENT CRUSTAL MOVEMENTS OF THE PACIFIC REGION
Wellington, New Zealand
Royal Society of New Zealand
Dr H.M. Bibby, Geophysics Division, DSIR,
Box 1320, Wellington, NEW ZEALAND

1984 Jul 21-28 8TH WORLD CONFERENCE ON EARTHQUAKE ENGINEERING
San Francisco, California, USA
IAEE
EERI-SWCEE, 2620 Telegraph Avenue, Berkeley, Ca 94704, U S A

1984 Aug 4-14 27TH INTERNATIONAL GEOLOGICAL CONGRESS
Moscow, USSR
IUGS
Organizing Committee of 27 IGC
Institute of the Lithosphere 22, Staromonetny,
Moscow 109180, USSR

1984 Oct 1-5 EUROPEAN SEISMOLOGICAL COMMISSION
(Provisional) Baku, Azibaydzhan, USSR
ESC

1984 Oct-Nov IASPEI REGIONAL ASSEMBLY
(Provisional) Hyderabad, India
ORGANIZATION

Registration forms and administrative details of the Conference should be obtained from:

IUGG Organizing Committee
Hamburg Messe u Congress GmbH
Postfach 302360
D-2000 Hamburg 36
FEDERAL REPUBLIC OF GERMANY

The Third Circular will be available shortly.

The registration fee is likely to be DM 290, which will include a set of abstracts as well as tickets to the main social functions. Accommodation will be in city hotels and guest houses, and is expected to range in cost from DM 175 to DM 40 per day for a single room (US$ 1 1/2 DM 2.5, £1 1/2 DM 4.3).

IUGG PROGRAMME

IUGG is sponsoring 21 inter-Association symposia, in which IASPEI is taking the lead in three and participating in eight more.

IASPEI Lead

8. Assessment of Natural Hazards (with IAVCEI, IAHS, IAPSO, Tsunami Committee)
   Principal Convenor: Prof G. Schneider
   16-19 Aug

9. Time-Dependent Processes and Properties in Planetary Materials (With IAVCEI, ICL)
   Principal Convenor: Prof H. Stiller
   22-23 Aug

10. Heat Flow and Geothermal Processes (with IAVCEI, IAHS)
    Principal Convenor: Prof L. Rybach
    23-24 Aug

IASPEI Participation

1. Structures and Processes in Subduction Zones (Lead - IAVCEI)
   IASPEI Convenor: Dr I. S. Sacks
   22-24 Aug

2. Lithospheric Deformations (Lead - IAG)
   IASPEI Convenor: Prof Zeng Rong-Sheng
   19, 22 Aug

5. Geophysics of the Polar Regions (Lead - IUGG)
   IASPEI Convenor: Dr E. S. Husebye
   22-24 Aug

6. Data Management (Lead - IAGA)
   IASPEI Convenor: Dr O. Dahlman
   16-17 Aug

7. Hot Spots and Mantle Plumes (Lead - IAVCEI)
   IASPEI Convenor: Prof E. R. Kanasewich
   19 Aug

11. Structure, Composition and Origin of the Oceanic Crust (Lead - IAVCEI)
    IASPEI Convenor: Dr H. Shimamura
    25-26 Aug

12. Plateau Uplift, Rifts and Volcanism (Lead - ICL)
    IASPEI Convenor: Dr R. W. Girdler
    17 Aug

13. Scientific Discoveries from MAGSAT Investigations (Lead - IAGA)
    IASPEI Convenor: Prof J. A. Jacobs
    22-23 Aug
IASPEI PROGRAMME

Business Sessions

Plenary sessions will be held on 15 August (pm) and 24 August (evening). These are open to all interested people.

Association Lectures

Association lectures will be given as follows:-
Prof B. L. N. Kennett "Inverse Problems in Perspective" 23 Aug (am)
Prof G. J. Wasserburg "Inferences of Mantle Structure and Evolution from Isotopic Geochemistry" 25 Aug (am)

Scientific Programme

In addition to participating in the IUGG Sumposia, IASPEI will hold scientific meetings as follows: Convenors' addresses as listed below.

1. Paleogeothermics
   Convenors: Buntebarth, Stegena 25 Aug

2. Standards in Geothermics
   Convenors: Haenel, Cermak 25 Aug

3. Microseisms
   Convenors: Darbyshire, Nikolaev 17 Aug

4. Earthquake Algorithms
   Convenors: Engdahl, Doornbos 24 Aug

5. Earthquake Parameters
   Convenors: Duda, Vanek 25 Aug

   Convenors: Shimazaki, Rice 22-23 Aug

7. Analysis of Strong Earthquake Motions
   Convenor: Ambraseys 26 Aug

8. Tsunami Wave Propagation (with IAPSO)
   Convenors: Wu, Soloviev 24 Aug

9. Quantitative Geodynamics
   Convenors: Neugebauer, Olson 19 Aug

    Convenors: Belousov, Giese 18 Aug

11. Structure of the Deep Interior of the Earth
    Convenors: Mueller, Cormier 18 Aug

12. European Geodynamics, Seismicity and Seismic Hazard
    Convenors: Ritsema, Malaroda 17 Aug
IASPEI Commissions

All Commissions should meet at the Assembly, preferably before the Plenary Session on 24 August. Suitable times will have to be confirmed at the Assembly, but the following are provisionally suggested:

- European Seismological Commission
- Commission on Microseisms
- Standard Earth Model Committee
- Commission on Earthquake Prediction
- Commission on Quantitative Geodynamics
- Commission on Practice
- International Heat Flow Commission
- Commission on Digital Seismology
- Commission on Physical Properties of Material of the Earth's Interior
- Commission on Strong Motion Seismology
- Commission on Controlled Source Seismology
- Commission on Physical Properties of Material
- Commission on Controlled Source Seismology

17 Aug (if needed)
17 Aug (pm)
17 Aug (evening)
18 Aug (evening)
19 Aug (pm)
19 Aug
22 Aug (evening)
22 Aug (evening)
23 Aug (evening)
23 Aug (evening)
Separate meeting in preceding week.

SUBMISSION OF PAPERS AND ABSTRACTS

In all cases the first approach should be made to the appropriate convenor listed here. Convenors will be responsible for programme arrangements and the acceptance of papers.

Abstracts must be submitted by 15 March 1983

For IUGG Symposia, the original abstract is to be submitted to the convenor. For IASPEI Symposia, the original abstract should be submitted to Dr R. D. Adams, Secretary-General IASPEI, International Seismological Centre, Newbury RG13 1LZ, England, with a copy to the convenor.

No special forms will be distributed for abstracts to be typed on, but they must be typed in a specified format that is reproduced here. More details will be given in the Third Circular. Original abstracts will be copied directly, so please ensure that they are typed clearly, and properly protected for mailing.

IASPEI CONVENORS FOR IUGG PROGRAMME 1983

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FOA 202, S-104 50 Stockholm 80, SWEDEN

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Prof H. Stillner
Zentralinstitut für Physik der Erde,
Telegrafenberg DDR-15 Potsdam, GDR

Prof Zeng Rong-Sheng
Institute of Geophysics
State Seismological Bureau,
Beijing, CHINA
# Provisional Timetable - IASPEI General Assembly 1983

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## IUGG Programme

### IUGG Session

1. Subduction Zones
2. Lithospheric Deformations
3. Geophysics of Polar Regions
4. Data Management
5. Hot Spots and Mantle Plumes
6. Assessment of Natural Hazards
7. Time-Dependent Processes
8. Heat Flow and Geothermal
9. Oceanic Crust
10. Uplift, Rifts and Volcanism
11. IASPEI Session
12. IASPEI Lecture
13. Paleogeothermics
14. Standards in Geothermics
15. Microseisms
16. Earthquake Algorithms
17. Earthquake Parameters
18. Earthquake Prediction
19. Strong Earthquake Motions
20. Tsunami Wave Propagation
21. Quantitative Geodynamics
22. Mapping of the Lithosphere
23. Deep Interior of the Earth
24. European Seismology

Open spaces denote poster sessions.
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Author's Name here

Author's Major Affiliation here

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