International Association of Seismology and Physics of the Earth's Interior

PRESIDENT
Prof. B. A. Bolt
Seismographic Station
Department of Geology and Geophysics
University of California, Berkeley
Berkeley, California 94720
U.S.A.

FIRST VICE-PRESIDENT
Prof. V. I. Keilis-Borok
Institute of Physics of the Earth
Academy of Sciences of USSR
Bolshaya Gruzinskaya, 10
Moscow 123 242
U.S.S.R.

SECOND VICE-PRESIDENT Prof. Ziro Suzuki Geophysical Institute Tohoku University Sendai 980 JAPAN

SECRETARY-GENERAL
Dr. R.D. Adams
International Seismological Centre
Newbury RGI3 1LX
Berkshire, UNITED KINGDOM
Cable Address: SEISMO NEWBURY
Telex: 849303 SEISMO G

In your reply refer to our ref:

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.

Robin Adams

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:

Vice-Presidents:

Secretary-General:

Assistant Secretary-General

Prof H. Stiller (GDR)

Dr E. Bisztricsany (Hungary)

Prof A. Udias (Spain)

Mr. J. M. Van Gils (Belgium) 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 indiction 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.

The proceedings of the Symposium "Properties of Materials at High Pressures and High Temperatures", held at the General Assembly of IASPEI at London, Ontario, in 1981, have been published as a special issue of "Physics of the Earth and Planetary Interiors", (Vol. 29, No. 1, 1982) with Prof H.H. Schloessin as Guest Editor.

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-PlanckInstitut 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-8WCEE, 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

IASPEI GENERAL ASSEMBLY 15-27 AUGUST 1983

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\$ $1 \stackrel{.}{=}$ DM 2.5, £1 $\stackrel{.}{=}$ 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.	Paleogeothermi	cs								
	Convenors:	Buntebarth, Stegena	25 Aug							
2.	Standards in G									
	Convenors:	Haenel, Cermak	25 Aug							
3.	Microseisms									
	Convenors:	Darbyshire, Nikolaev	17 Aug							
4.	Earthquake Alg									
	Convenors:	Engdahl, Doornbos	24 Aug							
5.	Earthquake Par									
	Convenors:	Duda, Vanek	25 Aug							
6.	Earthquake Pre									
	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 G									
	Convenors:	Neugebauer, Olson	19 Aug							
10.	Comprehensive Mapping of the Lithosphere									
	(with Commissi									
	Convenors:	Beloussov, Giese	18 Aug							
11.		44.00								
	Convenors:	Mueller, Cormier	18 Aug							
12.		namics, 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	17 Aug (if needed)				
Commission on Microseisms	17 Aug (pm)				
Standard Earth Model Committee	17 Aug (evening)				
Commission on Earthquake Prediction	18 Aug (evening)				
Commission on Quantitative Geodynamics	19 Aug (pm)				
Commission on Practice	19 Aug				
International Heat Flow Commission	22 Aug (evening)				
Commission on Digital Seismology	22 Aug (evening)				
Commission on Physical Properties of Material	A CONTRACTOR OF THE CONTRACTOR				
of the Earth's Interior	23 Aug (evening)				
Commission on Strong Motion Seismology	23 Aug (evening)				
Commission on Controlled Source Seismology	Separate meeting				
and the property of the control of t	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

Dr O. Dahlman Research Inst for National Defence FOA 202, S-104 50 Stockholm 80, SWEDEN

Dr R. W. Girdler School of Physics, The University, Newcastle-upon-Tyne NE1 7RU, UK

Dr E. S. Husebye NTNF/NORSAR/, P O Box 51 N-2007 Kjeller, NORWAY

Prof J. A. Jacobs Bullard Laboratories, Madingley Rise, Madingley Road, Cambridge CB3 OEZ, UK

Prof E. R. Kanasewich Dept. of Physics, University of Alberta, Edmonton, Alberta, CANADA T6G2J1

Prof L. Rybach
Institut für Geophysik, ETH - Hönggerberg
CH 8093 Zürich, SWITZERLAND

Dr I. S. Sacks Carnegie Inst. of Washington 5241 Broad Branch Road, NW Washington DC, 20015, U.S.A

Prof G. Schneider
Institut für Geophysik, Universität
Stuttgart, Richard-Wagner-Str. 44,
D-7000 Stuttgart - 1,
FEDERAL REPUBLIC OF GERMANY

Dr H. Shimamura Lab for Ocean Bottom Seismology Geophysical Inst. Hokkaido University Sapporo 060, JAPAN

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

Prof Zeng Rong-Sheng Institute of Geophysics State Seismological Bureau, Beijing, CHINA

CONVENORS IASPEI PROGRAMME 1983

Prof N N Ambraseys
Dept of Civil Engineering
Imperial College of Science & Technology
Imperial Institute Road
London SW7 2BU, ENGLAND UK

Prov V V Beloussov Inst. of Physics of the Earth Academy of Sciences of USSR Bolshaya Gruzinskaya 10, Moscow 123 242, U S S R

Dr G Buntebarth Inst. für Geophysik Technische Universität Clausthal Postfach 230, D-3392 Clausthal Zellenfeld FEDERAL REPUBLIC OF GERMANY

Dr V Cermak Geophysical Institute, Bocni II, CP 1401 14131 Praha 4 - Sporilov, CZECHOSLOVAKIA

Dr V F Cormier Lincoln Lab., Applied Seismology Group Massachusetts Inst. of Technology Cambridge Mass 02142, U S A

Prof J Darbyshire
Dept of Physical Oceanography
Marine Science Labs, Menai Bridge
Anglesey, Gwynedd LL59 5EY, NORTH WALES UK

Dr D J Doornbos NTNF/NORSAR, P O Box 51 N-2007 Kjeller, NORWAY

Prof S J Duda Institut für Geophysik, Bundesstrasse 55 D-2000 Hamburg 13 FEDERAL REPUBLIC OF GERMANY

Dr E R Engdahl Chief, Branch of Global Seismology USGS, Denver Federal Center Box 25046, Stop 967 Denver, CO 80225, U S A

Dr P Giese Institut für Geophysikalische Wissenschaften Rheinbabenallee 49, 1-Berlin 33 FEDERAL REPUBLIC OF GERMANY

Dr R Haenel
Niedersachs. Landesamt für Bodenforschung
A Bentz-Haus, Stilleweg 2
POB 54, 3 Hannover
FEDERAL GERMAN REPUBLIC

Prof R Malaroda Instituto di Geologia Via Accademia delle Scienze 5 10123 Torino, ITALY

Prof G Mueller Institut für Meteorologie u Geophysik Feldbergstrasse 47 D-6000 Frankfurt a M 1 FEDERAL REPUBLIC OF GERMANY

Prof H J Neugebauer Institut für Geophysik Technische Universität Clausthal Postfach 230, D-3392 Clausthal Zellenfeld FEDERAL REPUBLIC OF GERMANY

Prof A V Nikolaev
Inst. of Physics of the Earth
Academy of Sciences of USSR
Bolshaya Gruzinskaya 10
Moscow 123 242, U S S R

Prof P Olson Earth & Planetary Sciences John Hopkins University Baltimore MD 21218, U S A

Prof J R Rice Div. of Applied Sciences, Harvard Universit Pierce Hall, Oxford Street Cambridge, Mass 02138, U S A

Dr A R Ritsema KNMI, Box 201 3730AE De Bilt, NETHERLANDS

Prof K Shimazaki Earthquake Research Institute Yayoi 1-1-1, Bunkyo-ku Tokyo 113, JAPAN

Prof L Stegena
Dept. of Cartography, Ectvos University
Kum B 2, H 1083 Budapest VIII
HUNGARY

Dr J Vanek
Geophysical Institute
Bocni II, CP 1401
14131 Praha 4 - Sporilov
CZECHOSLOVAKIA

Prof T Y Wu California Institute of Technology 104-44 Pasadena, CA 91125, U S A

Prof S L Soloviev Institute of Oceanology, Krasikova 23 Moscow, 117218, U S S R

		PROVISIONAL TIMETABLE - IASPEI GENERAL ASSEMBLY 1983											
		MONDAY	TUESDAY	WEDNESDAY	THURSDAY.	FRIDAY	SATURDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		15 AUG	16 AUG	17 AUG	18 AUG	19 AUG	20 AUG		23 AUG	24 AUG	25 AUG	26 AUG	27 AUG
		1 2 3 4 E	1 2 3 4 F	1 2 3 4 E	1 2 3 4 E	1 2 3 4 E	1 2 3 4 E	1 2 3 4 E 1	2 3 4 E	1 2 3 4 E	1 2 3 4 E	1 2 3 4 E	1 2 3 4 E
	IUGG Session		1111	11111	1111	1111	1111	11111		1111	1111	1111	1.1
- 1	IÚGG Lecture		E	1111	111	1111	111	111	HILL	111	1	1111	1111
	1. Subduction Zones	E	x	1.111	1111	1111	1111				1	TILL	1111
	2. Lithospheric Deformations	c	H	1111	1111		1111		1111	1111	N	1111	1111
	5. Geophysics of Polar Regions		11 1	1111	1111	1111	1111		11		N	TELL	1111
M	6. Data Management	P	B		1111	1111	1111	1111	1111	1111	E	1.1.1	1111
PROGRAMME	7. Hot Spots and Mantle Plumes	T	11 1	1111	1111		1111	1111	IIII	1111		1111	1111
ROGE	8. Assessment of Natural Hazards	I	T	1			1111	11111	1111	1111	1111	1111	1111
IUGG PE	9. Time-Dependent Processes	11110	s	1111	1111	1111	1111			1111	1111	1111	1.1.1.1
	10. Heat Flow and Geothermal	N	1111	1111	1111	1111	1111	11111			1111	1111	1111
	11. Oceanic Crust	1111	1111	1111	1111	1111	1111	1111		1111			1111
	12. Uplift, Rifts and Volcanism	1111	1111		1111	THE	1111	1111		1111	1111	1111	1111
	13. MAGSAT Invest- igations	11111	1111	1111	1111	1111	1111			1111	1111	1111	1111
	IASPEI Session	1	1111	1111	1111	1111	1111	11111		111	11:11	1111	1111
IASPEI PROGRAMME	TASPEI Lecture	1111	1111	1111	1111	1111	1111	1111	111	1111	111	1111	1,111
	1. Paleogeothermics	11111	1111	1111	1111	1111	1111	11111	1111	1111	1.1	1111	1111
	2. Standards in Geothermics	1111	1111	1111	1111	1111	1111	11111	FILL	1111	1	1111	1111
	3. Microseisms	1111	1111		1,111	1111	1111	11111		1111	1111	1-1-1-1	1111
	4. Barthquake Algorithms	1111	1111	1111	1111	1111	1111	11111			1111	1111	1111
	5. Earthquake Parameters	1111	1111	1111	1111	1111	1111	1111	111	1111		1111	1111:
	6. Earthquake Prediction	1111	1111	1111	1111	1111	1111			1111	1111	1111	1111
	7. Strong Earth- quake Motions	1111	1111	1111	1111	1111	1111	11111		1111	[1111]		11.11
	8. Tsunami Wave Propagation	1111	1111	1111	1111	1111	1111	1111	411		1111	1111	1111
	9. Quantitative Geodynamics	1111	1111	1111	1111		1111	1111		1111	1111	1111	1111
	10. Mapping of the Lithosphere	1111	1111	1111		1111	1111	11111	HI	1111	1111	1111	1111
	11. Deep Interior of the Earth	1111	1111	1111	013	1111	1111	11111		1111	1111	1111	1111
	12. Buropean Seismicity	1111	1111		1111	1111	1111			1111	1111	1111	1111

OPEN SPACES DENOTE POSTER SESSIONS

...

IUGG XVIII General Assembly, 1983, Hamburg

This page is 63 PICA 10 characters wide