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NEWSLETTER No. 38

October 1996

Dear Colleagues:

This issue of the IASPEI Newsletter is the first to be distributed using the IASPEI bulk E-mail system to those who have Internet addresses. This system also will be used to broadcast announcements about forthcoming meetings and other information of interest to IASPEI members. Hard copy versions of the Newsletter will continue to be distributed to those without Internet addresses with the assistance of the National Geophysical Research Institute in Hyderabad, India.

I also take this opportunity to announce the continued development of a IASPEI home page on the WorldWideWeb. The address is <http://www.csd.net/~bergman/iaspei/> You can now obtain important information about the IASPEI General Assembly, to be held in Thessaloniki, Greece, 18-28 August 1997, on this home page and on a home page shortly to be set up in Greece. Check them out with your Web Browser! Your comments about how well the bulk E-mail system and the WWW home page may best work for you are welcome.

In this issue I bring your attention to a Meeting Report on the IASPEI Regional Assembly in Asia which was recently held in Tangshan, China, as well as important announcements about our General Assembly to be held in Thessaloniki, Greece, next August.

Sincerely,
E. R. Engdahl, Secretary-General

IASPEI Regional Assembly in Asia Tangshan, CHINA 1-3 August 1996

The IASPEI Regional Assembly in Asia was organized at Tangshan, China, during August 1-3, 1996. IASPEI, the Asian Seismological Commission, the State Seismological Bureau of China, and the Municipal Government of Tangshan city, China, were the principal sponsor. The local organizing committee headed by Prof. Chen Zhangli, Director-General of the State Seismological Bureau of China, made excellent arrangements for this assembly. Foreign delegates numbering over 90 were very warmly received at the airport and very good arrangements for their stay were made at Beijing from where they were taken by luxury buses to Tangshan on 31 July 1996. The arrangements for the stay at the Tangshan hotel and for other administrative and technical aspects of the assembly were satisfactory.

The assembly program included an Opening Ceremony and a Plenary Session in the forenoon of 1 August 1996. This was followed by 9 Technical Sessions and 3 Workshops covering different themes over the period 1-3 August 1996, and a closing Plenary Session on the evening of 3 August. A comprehensive abstract volume consisting of a total of 280 abstracts was brought out. The assembly was attended by a total of 278 delegates, 92 of these from outside China, representing 29 countries and regions. In all 185 oral and 95 poster presentations were made.

The opening ceremony was chaired by Dr. H. K. Gupta, Acting President of the Asian Seismological Commission. Prof. Chan Zhangli, Director-General of State Seismological Bureau, Dr. Zhang He, Mayor of the Municipal Government, Dr. Yang Qian, Vice-Governor of the Hebei province in which

Tangshan city is situated, and Prof. C. Froidevaux, President of IASPEI, addressed the gathering.

Dr. H. K. Gupta extended a warm welcome to the participants and gave a brief background of the genesis of this meeting. He gave an overview of the nature of calamity experienced by Tangshan 20 years back and other recent earthquakes like the Latur (India) earthquake of 29 September 1993 and the earthquake at Kobe (Japan) of 17 January 1995. He also mentioned the high seismicity of the Asia and southern Pacific region which experienced 58 of the total of 101 great earthquakes of magnitude 8 and more during the past 100 years. He ended his opening remarks by complimenting IASPEI, the Asian Seismological Commission, the State Seismological Bureau of China, the Municipal Government of Tangshan City, and all others associated in organizing this assembly.

Prof. Chan Zhangli, Chairman of the local organizing committee, extended a warm welcome to the participants and informed the participants about the scientific program of the assembly. Dr. Zhang He and Dr. Yan Qian in their addresses also extended a warm welcome to participants in general and to foreign delegates in particular, and mentioned that this assembly coincided with the 20 years of rebuilding of Tangshan city after the devastating earthquake of the 1976. Their addresses also included some experiences of the State Government and the people of Tangshan city during the said devastating earthquake of 1976 and the rebuilding of the city thereafter. Prof. Froidevaux, President of IASPEI in his welcome address dwelt upon the role of IASPEI and the Asian Seismological Commission in promoting research in the field of seismology and active interaction between scientists from different countries. The opening ceremony was concluded by Dr. H. K. Gupta thanking the dignitaries on the dais for their encouraging opening remarks. He also expressed his appreciation and thanks for the excellent arrangements made by the hosts.

The opening ceremony was followed by a Plenary Session which was chaired by Dr. H.K. Gupta and included invited talks from Prof. B.L.N. Kennett (Australia) Prof. K. Oike (Japan) Prof. Chen Yuntai (China), and Mr. Zhang Yu, Vice Mayor of the Tangshan Municipal Government. Prof. Brian Kennett

addressed certain recent developments in improving the understanding of the seismograms, and dealt with a recently developed technique for automatically picking seismic phases. Prof. Oike addressed the problem of long term cyclic variation of seismicity in southwest Japan and identified certain seismicity distribution patterns associated with major earthquakes. Prof. Chen Yuntai examined the complexities of earthquake source processes using broad band digital seismic waveform data of a few recent earthquakes. The snapshots showing the spatial-temporal release of moment were the highlight of his presentation. Mr. Zhang Yu elegantly addressed the issue of balance development and seismic hazard reduction to forward economic development and social progress. He dwelt on the microzonation aspects using geomorphology, tectonics, etc., and informed that the new constructions and planning of Tangshan city has been done accordingly.

Nine Technical Sessions "S1 to S9" and three Workshops "W1 to W3" were held beginning from the afternoon of 1 August 1996 until the afternoon of 3 August 1996. The various sessions were held in parallel in 3 different conference rooms. The details of the topics covered in these sessions, some salient results presented, etc., are as given below:

Session 1: Earthquake Precursors, Earthquake Prediction, and Physics of Earthquake Sources; Conveners: Prof. Chen Yuntai, Prof. K. Oike; Total Presentations 111 (Oral 55; Poster 56). This Session attracted the maximum number of presentations. The highlights included new algorithms developed for 3-D rupture analysis by Prof. Chen Yuntai and Dr. D. Helmberger, forecast of earthquakes in Kyrghyza on the basis of a suite of precursors. Dr. Valiya Hamza addressed the problem of significant thermal anomalies associated with earthquakes. Several precursors were identified in hindsight on the occurrence of large earthquakes, particularly the Tangshan earthquake. Prof. Duda stressed the need of quantification of earthquakes. Du Xingxin presented a faster approach for determining the average stress field using genetic algorithms. The paper by Wang Bing-Hong et al., dealt with multifractal behavior of the spatial distribution of earthquakes and brought out the possibility for intermediate term prediction using D_q

dimension spectrum. Yin Xiangchu presented a new approach for earthquake prediction based on the load/unload response ratio theory.

Session 2: Strong Ground Motion and Earthquake Hazard; Conveners: Dr. Gao Mengtan, Dr. G. Gibson; Total Presentations 34 (Oral 24; Poster 10). The presentations and discussion expressed an obvious need to shift from deterministic approach to probabilistic approach of earthquake hazard assessment. According to a paper by Yuxian Hu and Zenping, the probability of Tangshan being hit by an earthquake similar to the 1976, even over the next 100 years, is estimated to be about 10%. Several geotechnical parameters were examined to understand the role played by soil conditions and fault movement in causing damage by past earthquakes. Prof. Bruce Bolt pointed out that displacement is a more important parameter compared to acceleration for estimating the damage potential of a structure. Zhao Fengxin presented a semi-empirical method using the records of small events in the region around an engineering site for generating design accelerograms and response spectra.

Session 3: Wave Propagation and Tomographic Imaging; Conveners: Prof. Zhang Xiankang, Prof. B.L.N. Kennett; Total Presentations 29 (Oral 23; Poster 6). In session 3 results were presented from several parts of Asia and Australia. The study by Sun Ruomei and Liu Futiaan indicated that the locale of the Tangshan earthquake is found to be associated with sharp lateral and radial velocity gradients. Prof. Claude Froidevaux presented interesting results on detecting mantle plumes using long-period scattered seismic body waves. Dr. Soren Gregerson offered a physical explanation of Lg waves. A paper by Zhang Xiankang et al., described the results of 3D velocity modeling in parts of north China, including the distribution of deep faults and their satisfactory comparison with deep seismic sounding data. Study of the 660 km discontinuity beneath northeast part of China was the subject matter of a paper by Shao-Xian Zang, et al.

Session 4: Geothermics and Volcanology; Conveners: Prof. Wan Jiyang, Dr. R. Punongbayan; Total Presentations 15 (Oral 8; Poster 7). Dr. R.U.M. Rao reported that there is not much variation in the thermal picture

over the entire Deccan Volcanic Province of India based on careful measurements in deep boreholes. Dr. Zhang Hunan presented the basic characteristics of Cenozoic Volcanism in coastal area of South China. A paper by Guo Lucan, et al., described the eruption risk of Changbai mountain volcanoes. Other papers addressed problems of dormant volcanoes, crustal structure, heat flow, and seismicity.

Session 5: Recent Devastating Earthquakes in Asia and Southern Pacific Region; Co-Conveners: Prof. Zhu Yuanqing, Prof. M. Ohtake; Total Presentations 11 (Oral 7; Poster 4). In Session 5, reports on the 1995 Hanshin earthquake by Han Zhujun, et al., and the 1996 Lijiang earthquake by Zyjin Liu and Youjing Su. The presentation by Han Zhujun illustrated that the Hanshin M7.2 earthquake was caused by pivotal movement along a strike-slip fault. Some aspects of the 1993 Latur (India) earthquake and the 1992 Suusamyir earthquake were also presented.

Session 6: Subduction Processes; Conveners: Prof. Zang Shaoxian, Dr. U. Raval; Total Presentations 8 (Oral 6; Poster 2). In Session 6 the papers presented included seismic tomography of subduction zones by B.L.N. Kennett and a conceptual model for intraslab earthquakes by S. Kirby and E.R. Engdahl. Other papers dealt with topics like arc volcanism, topside slab metamorphism, etc.

Session 7: Seismic Tectonics and Space Geodesy; Conveners: Prof. Gu Guohua, Dr. Phan Trong Trinh; Total Presentations 30; (Oral 15; Poster 15). Most of the papers in session 7 examined tectonic features, crustal deformation, and their relation to earthquake occurrence.

Session 8: Societal Impact of Earthquakes; Conveners: Prof. Yuan Yifan, Dr. Sinan Gencoglu; Total Presentations 8 (Oral 3; Poster 5). In Session 8 useful topics of medical services, utility lifelines, and ways and means of reducing disaster due to earthquakes were discussed.

Session 9: Triggered/Induced Seismicity; Convener: Dr. K. Rajendran; Total Presentations 21 (Oral 10; Poster 11). In Session 9 the majority of the papers concerned Koyna reservoir in Western India which continues to be the most important site of induced earthquakes in the world and where induced earthquakes have been occurring for

the past 34 years. Dr. Kumpel presented results of in situ-pore-pressure measurements in Koyna while Dr. Rastogi underlined the enhanced seismicity in Koyna during 1993-95. Dr. Rajendran presented a model for continued RIS at Koyna. Other papers reported induced earthquakes in China, Thailand, and Vietnam. Yang Zhu'en, et al., presented data on the geology and seismology aspect of induced earthquakes in the Dongjiang reservoir located in south China, making the concluding remark that the maximum magnitude of an induced earthquake in this region is about 4.0.

Workshop 1: Implementation of Global Seismic Hazard Assessment Program (GSHAP) in Central and Southern Asia; Conveners: Prof. Zhang Peizhen, Mr. S.C. Bhatia; Total Presentations 7 (Oral 7). In Workshop 1 recent results of GSHAP Test Area #8, comprising eastern Himalaya, Nepal, South China, Bangla Desh and Myanmar, were discussed. Dr. Peizhen Zhang concluded these presentations with his latest results where the test area has been divided into 20 zones and probabilistic estimates of accelerations have been made. Other papers in this Workshop gave earthquake hazard estimates in Bangla Desh and Nepal.

Workshop 2: Gaps in the World-Wide Seismological Publication Web; Convener: Prof. Bruce A. Bolt; Total Presentations 2 (Oral 2). In Workshop 2 Prof. Bruce Bolt underlined the need to set up World Wide Webs on earthquake information. Such services are already functional at the California Earthquake Data Center, the State Seismological Bureau, China, and some locations in Switzerland, Australia, etc. It was emphasized that this facility needs to be created at all seismological study centers. It was suggested that an international working group on this problem be set up.

Workshop 3: Earthquake Scenario Seismic Risk and Loss Assessment; Conveners: Prof. Chen Yong, Dr. Avi Shapira; Total Presentations 6 (Oral 6). One of the highlights was a presentation by Dr. E.R. Engdahl showing improvements in teleseismic earthquake locations using improved travel times and procedures for depth determination.

Although at its 1995 General Assembly IASPEI had already granted commission status to the ASC, it remained necessary to complete this process by taking the steps required to formally establish the Asian Seismological Commission. This was accomplished at the first ASC Council meeting, held on 3 August 1996 and chaired by Dr. E.R. Engdahl, Secretary-general of IASPEI, at which statutes for the commission were adopted, officers elected, and a time and venue for the next ASC General Assembly set. Dr. Engdahl noted that IASPEI is pleased to welcome the ASC to its family of regional commissions and to recognize the newly elected officers (President, Dr. Harsh Gupta; Vice Presidents, Drs. Kazuo Hamada and Gary Gibson, and

Secretary-General, Prof. Zhu Chuanzhen. IASPEI especially encourages all Asian and Pacific member nations to actively participate in the new commission. It was proposed that a General Assembly of the Asian Seismological Commission and a Symposium on seismology related topics be organized in 1998 at the National Geophysical Research Institute, Hyderabad, India. Dr. H.K. Gupta, Director, NGRI agreed to take the responsibility and to play host.

Also, a visit to the Tangshan Earthquake Museum ruins of 1976 Tangshan earthquake, Pottery and Porcelain Museum etc. were organized in the afternoon of 2 August 1996. A cultural program with a Chinese traditional performance was organized later in the evening.

The closing plenary session was held in the afternoon of 3 August 1996 under the Chairmanship of Prof. Zhu Chuanzhen, Acting Secretary-General of the ASC. Dr. H.K. Gupta, Acting Chairman of ASC addressed the gathering and provided a brief overview of the scientific deliberations during the 3 days meeting. He also expressed his thanks to the conveners and the speakers and remarked that the scientific content of all the papers were of a very high quality. Prof. He Yongina, Deputy Director-General of the State Seismological

Grant Policy

Limited funds will be made available by IASPEI to support participation in the General Assembly. These IASPEI grants are provided to worthy recipients on the basis of their financial need and scientific contribution to the Assembly. However, young scientists will be given special attention. These grants are ordinarily used to pay the Registration Fee and/or partial living expenses, but can also be used to help defray travel expenses. Payment of grants will ONLY be made by the Secretary-General at the General Assembly.

Requests for IASPEI financial support should be sent to the lead conveners of sessions to which you will be submitting papers. IASPEI Commission, Sub-Commission and Working Group Members may also send requests for financial support to their Commission Chairs. Requests for financial support should NOT be made directly to the IASPEI Secretary-General.

Pre- and Post-Assembly Travel Agent

Bureau of China, Mr. Han Shengyu, Vice Mayor of Tangshan Municipal Government, and Dr. E.R. Engdahl, Secretary General of IASPEI, also addressed the gathering. Dr. Engdahl expressed his appreciation, on behalf of IASPEI, for the successful organization of this assembly.

H.K. Gupta (President, ASC)

29th General Assembly, IASPEI Thessaloniki, GREECE 18-28 August 1997

The Second Circular for this Assembly, which will include scopes for Symposia and Workshops, registration materials, and information on accommodations, will shortly be distributed. by the Local Organizing Committee. To receive further information contact the Secretariat, Geophysical Laboratory, University of Thessaloniki, GR-540 06, Thessaloniki, GREECE (Tel: 30 31 998526;

E-mail: IASPEI@geo.auth.gr; Fax 30 31 998528). You may also consult the IASPEI home page address on the WorldWideWeb at <http://www.csd.net/~bergman/iaspei/> and at a mirror home page shortly to be set up in Greece.

IASPEI has arranged for Carlson Wagonlit Travel to be its official pre- and post-assembly travel agent. Carlson is an international travel company with a network of over 4,100 locations in 125 countries. Through Carlson you can arrange flights on regularly scheduled airlines at meeting rates and tours especially designed to fit in before or after the General Assembly.

Please note, however, that to book rooms you must work with the travel agent (Charioteer) provided by the Local Organizing Committee.

Julia Williamson, IASPEI's travel counselor at Carlson Marco Polo Travel, will work with you to meet your individual needs. Julia can be contacted at Carlson Wagonlit Marco Polo Travel in the following ways:

Telephone: 1-800-259-0683(toll free)
1-713-956-4949
Fax: 1-713-956-1261
E-mail: seismology@cwtpmarco.com
marcopolo@cwtpmarco.com

The agency is also developing a Home Page at www.cwtmarco.com, which at the moment is fairly elementary but which in the near future will have information on pre- and post-assembly packages and a direct link to the travel agency E-mail.

Provisional Framework Program

See attached page.

Provisional Scientific Program

Full scopes for all Symposia and Workshops can be found on the IASPEI Home Page (<http://www.csd.net/~bergman/iaspei/>) or by anonymous ftp to 136.177.20.1 and then change directory (cd) to IASPEI.

Association Lectures

L1 Deep Structure and Active Tectonics in the Aegean and Surrounding Area. Lecturer: C. Papazachos (Greece)

L2 The Global Seismic Hazard Assessment: Program: 1992-1997. Lecturer: D. Giardini (Italy)

Symposia

S1 Earthquake Scenario, Seismic Risk and Loss Assessment. Conveners: Chen, Yong (China), A. Kappos (UK), A. Shapira (Israel), K. Pitilakis (Greece). [Prof. Chen, Yong, State Seismological Bureau, No. 63, Fuxing Avenue, Beijing 100036, CHINA; Tel: 86 10 821 9525; E-mail: chenyong@sun.ihep.ac.cn; Fax: 86 10 68215973]

S2 Are the Oceanic Plates Rigid?. Conveners: D. Sandwell (USA), L. Fleitout (France), K. Katsambalos (Greece). [Dr. David T. Sandwell, Institute of Geophysics and Planetary Physics, Scripps Institute of Oceanography, University of California at San Diego, A-025, La Jolla, CA 92093, USA; Tel: 1 619 534 7109; Fax: 1 619 534 9873; E-mail: sandwell@radar.ucsd.edu]

S3 Geodynamics of the Alpine-Mediterranean Collision Zone (Co-Sponsored by ICL/ILP). Conveners: W. Spakman (The Netherlands), B.A.C. Ambrosius (The Netherlands), E. Kissling (Switzerland), D. Mountrakis (Greece), G. Veis (Greece). [Dr. Wim Spakman, Department of Geophysics, Institute of Earth Sciences, Budapestlaan 4, 3584 CD Utrecht, THE NETHERLANDS; Tel: 31 30 253 5073; E-mail: wims@geof.ruu.nl; Fax: 31 30 253 5030]

S4 Strong Ground Motion in Different Tectonic Regions. Conveners: Xie, Li-li (China), N. Ambraseys (UK), N. Theodulidis (Greece). [Prof. Xie, Li-Li, Institute of Engineering Mechanics, State Seismological Bureau, 9 Xuefu Road, Harbin 150080, CHINA; Tel: 86 451 66 64756/61304 Fax: 86 451 66 64755; E-mail: llxie@sdb.csdia.ac.cn]

S5 Continental Crustal and Lithospheric Models From Seismic and Non-Seismic Data: Frontier Regions and Revisions to Accepted Models. Conveners: W. D. Mooney (USA), G. Musacchio (Italy), Wang, Chunyong (China). [Dr. Walter D. Mooney, U.S. Geological Survey, Mail Stop 977, 345 Middlefield Road, Menlo Park, CA 94025, USA; Tel: 1 415 329 4764; E-mail: mooney@andreas.wr.usgs.gov; Fax: 1 415 329 5163]

S6 Stochastic Seismology: Waves in Complex Media. Conveners: Wu, Ru-Shan (USA/China), K. Holliger (Switzerland), H. Sato (Japan). [Dr. Wu, Ru-shan, Institute of Tectonics, Earth Sciences, University of California, Santa Cruz, Santa Cruz, CA 95064, USA; E-mail: wrs@rupture.ucsc.edu; Fax: 1 408 459 2127]

S7 Time and Non-Time Dependent Seismicity Models and Their Application in Seismic Hazard Assessment. Conveners: B. Papazachos (Greece), J. Bonnin (France), F. Mulargia (Italy), G. Purcaru (Germany), J. Rundle (USA), I. Papoulia (Greece). [Prof. Basil C. Papazachos, Laboratory of Geophysics, University of Thessaloniki, GR-54006, Thessaloniki, GREECE; E-mail: basil@geo.auth.gr; Tel: 30 31 998501; Fax: 30 31 998528]

S8 Mantle Rheology and Geodynamics: Inverse Problems and Geophysical Phenomenology (Co-Sponsored by CMG and SEDI). Conveners: W.R. Peltier (Canada) and K. Lambeck (Australia), B. Hager (USA), R. Sabadini (Italy), S. Singh (UK). [Prof. W. Richard Peltier, Department of Physics, University of Toronto, 60 St. George Street, Toronto, Ontario M5S 1A7, CANADA; Tel: 1 416 978 2938; Fax: 1 416 978 8905; E-mail: peltier@atmosph.physics.utoronto.ca]

S9 Heat Flow, Seismic Structure and Seismicity in Active Tectonic Regimes. Conveners: L. Rybach (Switzerland), S.B. Smithson (USA), M. Fytikas (Greece). [Prof.

Ladislav Rybach, Institut fuer Geophysik, ETH-Hoenggerberg, CH-8093 Zurich, SWITZERLAND; Tel: 41 1 633 2076; E-mail: rybach@geo.phys.ethz.ch; Fax: 41 1 633 1065]

S10 Earthquakes, Paleoseismology and Active Tectonics (Co-Sponsored by ICL/ILP). Conveners: Zhang, Peizhen (China), S. Pavlides (Greece). [Prof. Zhang, Peizhen, Institute of Geology, State Seismological Bureau, Beijing 100029, CHINA; Tel: 86 10 62356420; E-mail: peizhen@public3.bta.net.cn; Fax: 86 10 62028617]

S11 Structure in the Lithosphere, Geodynamic Processes and Anisotropy (Co-Sponsored by ICL/ILP). Conveners: J-P. Montagner (France), L. Vinnik (Russia), M. Warner (UK), G. Drakatos (Greece), P. Papadimitriou (Greece). [Prof. Jean-Paul Montagner, Institut de Physique du Globe, Tour 24, 4, place Jussieu, F-75232 Paris Cedex 05, FRANCE; Tel: 33 1 44 27 3899; E-mail: jepm@ccr.jussieu.fr; Fax: 33 1 44 27 3894]

S12 Achievements and Future Perspectives After 30 Years of Global Travel Time Data on the Bulletins of the International Seismological Centre. Conveners: A. Morelli (Italy), A. Hughes (UK), B. Karacostas (Greece). [Dr. Andrea Morelli, Istituto Nazionale di Geofisica, Via di Vigna Murata 605, 00143 Roma, ITALY; Tel: 39 6 518601/51860443; Fax: 39 6 5041181; E-mail: morelli@ingrm.it]

S13 Earthquake Prediction. Conveners: K. Hamada (Japan), Chen, Yong (China), E. Papadimitriou (Greece). [Dr. Kazuo Hamada, Association for the Development of Earthquake Prediction, Earthquake Research Center (ERC), 1-5-18 Sarugakucho, Chiyoda-ku, Tokyo 101, JAPAN; Tel: 81 3 3295 1502; Fax: 81 3 3295 1508; E-mail: hamada@erc.adep.or.jp]

S14 Structure and Evolution of the Earth: Geophysical Observations, Laboratory Constraints, and Modeling (Joint with SEDI). Conveners: T. Shankland (USA), A. Chopelas (Germany), S. Honda (Japan), H. Paulssen (The Netherlands), J.-P. Poirier (France), D. Kondopoulou (Greece) [Thomas J. Shankland, Earth & Environmental Sciences Division, MS D443, Los Alamos National Laboratory, Los Alamos, NM 87545, USA; Tel: 1 505 667

4907; E-mail: shankland@lanl.gov; Fax: 1 505 667 8487]

S15 Volcano Seismology. Conveners: H. Benz (USA), B. Chouet (USA), Y. Ida (Japan), M. Martini (Italy), Ph. Voidomatis (Greece). [Dr. Harley Benz, U.S. Geological Survey, P.O. Box 25046, Mail Stop 966, Denver Federal Center, Denver, CO 80225, USA; Tel: 1 303 273 8593; Fax: 1 303 273 8600; E-mail: benz@cora.cr.usgs.gov]

S16 Earthquake Nucleation, Dynamic Rupture, and its Arrest: Observations and Physical Modeling. Conveners: M. Ohnaka (Japan), G.C. Beroza (USA), M. Campillo (France), S. Das (UK), W.L. Ellsworth (USA), G. Stavrakakis (Greece). [Prof. Miti Ohnaka, Earthquake Research Institute, University of Tokyo, Yayoi 1-1-1, Bunkyo-ku, Tokyo 113, JAPAN; Tel: 81 3 3812 2111 (ext. 5711); E-mail: ohnaka-m@eri.u-tokyo.ac.jp; Fax: 81 3 3816 1159/5689 4467]

S17 Subduction Zones: Structure, Dynamics and Magmatism. Conveners: D. Zhao (USA), A. Hasegawa (Japan), M. Reyners (New Zealand), Zang, Shao-Xian (China), S. Dimitriadis (Greece). [Dr. Dapeng Zhao, Department of Earth and Planetary Sciences, Washington University, Saint Louis, MO 63130, USA; Tel: 1 314 935 7372; E-mail: dapeng@izu.wustl.edu; Fax: 1 314 935 7361]

S18 Seismic Waves in the Elastically Nonlinear Energy-Saturated Earth. Conveners: I. Beresnev (Canada/Russia), A.V. Nikolaev (Russia), K-L. Wen (Taiwan), P. Dimitriou (Greece). [Dr. Igor A. Beresnev, Department of Earth Sciences, Carleton University, 304 Tory Building, 1125 Colonel By Drive, Ottawa, Ontario K1S 5B6, CANADA; Tel: 1 613 520 2600 (ext. 1393); E-mail: igor@ottawa.net; Fax: 1 613 520 4490]

S19 Slab Structure and Dynamics of Deep Subduction. Conveners: R. van der Hilst (USA), M. Gurnis (USA), C. Lithgow-Bertelloni (USA), D. Rubie (Germany), M. Weber (Germany), N. Delibassis (Greece). [Prof. Rob van der Hilst, Department of Earth, Atmospheric and Planetary Sciences, Massachusetts Institute of Technology, Room 54-514, Cambridge, MA 02139, USA; Tel: 1 617 253 6977; Fax: 1 617 253 9697; E-mail: hilst@mit.edu]

S20 Seismological Data and Practice - Beyond Year 2000. Conveners: E.S. Husebye

(Norway), E. Bergman (USA), F. Dowla (USA), E. Hjortenberg (Denmark), M. Joswig (Germany), H. Kawakatsu (Japan), A. Tselentis (Greece). [Dr. Eystein S. Husebye, Institute for Solid Earth Geophysics, University of Bergen, Allegaten 41, N-5007 Bergen, NORWAY; Tel: 47 5558 34029; E-mail: eystein.husebye@ifjf.uib.no; Fax: 47 5558 966]

S21 Hotspots and Plumes: Origin, Ascent, and Interaction With the Lithosphere. Conveners: H-C. Nataf (France), U. Achauer (France), U. Christensen (Germany), J. Phipps-Morgan (USA), J. VanDecar (USA), A. Vafidis (Greece). [Dr. Henri-Claude Nataf, Departement Terre-Atmosphere-Ocean, Ecole Normale Supérieure, 24, rue Lhomond, F-75231 Paris Cedex 05, FRANCE; Tel: 33 1 44 32 22 04; Fax: 33 1 44 32 22 00; E-mail: nataf@geophy.ens.fr]

S22 Geophysical Features of the Urals and Other Mountain Belts. (Co-Sponsored by ICL/ILP). Conveners: C. Juhlin (Sweden), S. Kashubin (Russia), A. Perez-Estuan (Spain), F. Wenzel (Germany), D. Papanikolaou (Greece). [Dr. Chris Juhlin, Department of Geophysics, Uppsala University, Villavagen 16, S-75236 Uppsala, SWEDEN; Tel: 46 18 182392; Fax: 46 18 501110; E-mail: cj@geofys.uu.se]

S23 New Approaches to the Estimation of Earthquake Size. Conveners: J. Nabelek (USA), N. Kondorskaya (Russia), A. Kiratzi (Greece). [Prof. John L. Nabelek, College of Oceanography, Oregon State University, Corvallis, OR 97331, USA; Tel: 1 541 737 2757; E-mail: nabelekj@ucs.orst.edu; Fax: 1 541 737 2064]

Workshops

W1 Earthquake Early Warning Systems. Conveners: W. Lee (USA), J.M. Espinosa-Aranda (Mexico), E. Scordilis (Greece). [Dr. W.H.K. Lee, U.S. Geological Survey, Mail Stop 977, 345 Middlefield Road, Menlo Park, CA 94025, USA; Tel: 1 415 329 4754; E-mail: whklee@ix.netcom.com; Fax: 1 415 329 5163]

W2 Elaboration of Historical Earthquake Data With Emphasis on the Aegean and Surrounding Area. Conveners: G. Karakaisis (Greece), M. Stucchi (Italy), V. Kouskouna (Greece). [Prof. George Karakaisis, Laboratory of Geophysics, University of Thessaloniki, GR-54006 Thessaloniki,

GREECE; Tel: 30 31 998484; E-mail: karakaisis@geo.auth.gr; Fax: 30 31 998528]

W3 Towards Reference Earth Models (Co-Sponsored by SEDI). Conveners: G. Masters (USA), B.L.N. Kennett (Australia), Y. Ricard (France). [Prof. Guy Masters, Institute of Geophysics and Planetary Physics, Scripps Institute of Oceanography, University of California, San Diego, MC A-025, La Jolla, CA 92093, USA; Tel: 1 619 534 4122; E-mail: gmasters@ucsd.edu; Fax: 1 619 534 5332]

W4 Lithospheric Structure: A Key for Understanding Seismotectonics and Seismic Hazard of the Carpatho-Balkan Region (Co-Sponsored by ICL/ILP). Conveners: I. Kuznetsov (Russia), M. Radulian (Romania), G.F. Panza (Italy), C. Papazachos (Greece). [Dr. Igor Kuznetsov, Int. Inst. Earthquake Prediction, Warshavskoye SH.79, K2, SU-113556 Moscow, RUSSIA; Tel: 7 095 110 7795; Fax: 7 095 956 7095/310 7032; E-mail: ikuz@mitp.rssi.ru]

W5 New Concepts and Procedures in Earthquake Hazard Assessment. Conveners: V. Schenk (Czech Republic), D. Mayer-Rosa (Switzerland), R. McGuire (USA), C. Papaioannou (Greece). [Dr. Vladimir Schenk, Institute of Rock Structure and Mechanics, Academy of Sciences of Czech Republic, V. Holesovickach 41, 182 09 Praha 8, CZECH REPUBLIC; Fax: 42 2 6880105/6880649; E-mail: schenk@lorien.site.cas.cz; Tel: 42 2 66009 338/337]

W6 Electromagnetic Signals Related to Tectonic Processes. Conveners: S. Park (USA), J. Zschau (Germany), P. Varotsos (Greece). [Prof. Steve Park, Institute of Geophysics and Planetary Physics, University of California, Riverside, CA 92521, USA; Tel: 1 909 787 4501; Fax: 1 909 787 4509; E-mail: magneto@ucrmt.ucr.edu]

W7 Earthquake Site Effects and Models for Assessing the Site Response. Conveners: K. Kudo (Japan), P-Y. Bard (France), W.D Iwan (USA), B. Tucker (USA), G. Gazetas (Greece). [Dr. Kazuyoshi Kudo, Earthquake Research Institute, University of Tokyo, Yayoi 1-1-1, Bunkyo-Ku, Tokyo 113, JAPAN; Tel: 81 3 3812 2111 (ext. 5792); Fax: 81 3 5803 2697/3816 1159; E-mail: kudo@eri.u-tokyo.ac.jp]

W8 Recent Strong Earthquakes in European-Mediterranean Region. Conveners: K. Makropoulos (Greece), D. Hatzfeld (France), D. Papastamatiou (Greece). [Prof. Kostas C. Makropoulos, Seismological Laboratory, Department of Geophysics and Geothermy, University of Athens, GR-15784 Ilissia, Athens, GREECE; Tel: 30 1 7257630; E-mail: kmacrop@atlas.uoa.gr; Fax: 30 1 724 3217]

W9 Educating the Public About Earthquake Hazards and Risk. Conveners: J. Andrews (USA), Gu, Jian-hua (China), K. Ioannides (Greece). [Ms. Jill Andrews, Southern California Earthquake Center, University of Southern California, University Park, Los Angeles, CA 90089-0742, USA; Tel: 1 213 740 3459; Fax: 1 213 740 0011; E-mail: jandrews@coda.usc.edu]

W10 Earthquake Preparation Process: Quantitative Method and Hypothesis Testing. Conveners: M. Wyss (USA), R. Console (Italy), D. Rhoades (New Zealand), J. Latoussakis (Greece). [Prof. Max Wyss, Geophysical Institute, University of Alaska, Fairbanks, AK 99775-0800, USA; Tel: 1 907 474 5529; Fax: 1 907 474 7290; E-mail: max@giseis.alaska.edu]

W11 Strong Ground Motion: Recent Trends in Networking, Database and Data Processing. Conveners: V. Margaris (Greece), D. Rinaldis (Italy), G. Brady (USA), X. Goula (Spain). [Dr. Vasilis Margaris, ITSAK, P.O. Box 53. GR-55102 Foinikas, Thessaloniki, GREECE; Tel: 30 31 476081; Fax: 30 31 476085; E-mail: seismos@geo.auth.gr]

W12 Comparison of Techniques for Computing Synthetic Seismograms for 3-D Global Earth Models. Conveners: H. Igel (UK), R. Geller (Japan), B. Romanowicz (USA). [Dr. Heiner Igel, Institute of Theoretical Physics, Department of Earth Sciences, Downing Street, Cambridge CB2 3EQ, UNITED KINGDOM; Tel: 44 1223 33 34 63; E-mail: heiner@esc.cam.ac.uk; Fax: 44 1223 33 34 50]

W13 Triggered/Induced Earthquakes. Conveners: H. Gupta (India), J. Gombert (USA), P. Hatzidimitriou (Greece). [Dr. Harsh K. Gupta, National Geophysical Research Institute, Council of Scientific and Industrial Research, Uppal Road, Hyderabad 500 007, INDIA; Tel: 91 40 671124; Fax: 91 40

671564;
E-mail: harsh@csngri.ren.nic.in]

W14 Advanced Geoinformation Technologies for Earthquake Hazard and Seismic Risk Assessment. Conveners: Y.S. Tyupkin (Russia) and V.G. Gitis (Russia), K. Stylianides (Greece), N. Voulgaris (Greece). [Dr. Yuri S. Tyupkin, Geophysical Center, Russian Academy of Sciences, Molodezhnaya, 3, Moscow 117 296, RUSSIA; Tel: 7 095 930 5629/0546; E-mail: tyupkin@wpcb.rssi.ru; Fax: 7 095 930 5509]

W15 Manual of Seismological Observatory Practice. Conveners: P. Bormann (Germany), G. Choy (USA), J. Baskoutas (Greece). [Prof. P. Bormann, GeoForschungsZentrum Potsdam (GFZ), Telegrafenberg A17, D-14473 Potsdam, GERMANY; Tel: 49 331 288 1523; E-mail: course@gfz-potsdam.de Fax: 49 331 288 1527/1534;]

W16 Long Period Studies of Lithospheric Structure and Engineering Seismology. Conveners: H. Bungum (Norway), G. Woo (UK), J. Kalogeras (Greece). [Prof. Hilmar Bungum, NFR/NORSAR, POB 51, N-2007 Kjeller, NORWAY; Tel: 47 638 17121; Fax: 47 638 18719; E-mail: hilmar@norsar.no]

W17: the Global Seismic Hazard Assessment Program 1992-1997 (Co-Sponsored by ICL/ILP). Conveners: P. Basham (Canada), V.K. Gaur (India), K. Shedlock (USA), T. Tsapanos (Greece). [Mr. Peter W. Basham, Geophysics Division, Geological Survey of Canada, 1 Observatory Crescent, Ottawa, Ontario K1A 0Y3, CANADA; Tel: 1 613 995 0904; E-mail: basham@seismo.emr.ca Fax: 1 613 992 8836]

W18 Instrumentation Prospects for the Future. Conveners: J. Berger (USA), K. Suyehiro (Japan), D. Fountoulis (Greece). [Dr. Jon Berger, Institute of Geophysics and Planetary Physics, Mail Code A-025, Scripps Institute of Oceanography, La Jolla, CA 92093-0225, USA; Tel: 1 619 534 2889 Fax: 1 619 534 6354; E-mail: jberger@ucsd.edu;]

W19 Multi-Parameter and Multi-Scale Analysis of Seismicity and Related Fields. Conveners: G.A. Sobolev (Russia), I. Main (UK), V.B. Smirnov (Russia), G. Tsokas (Greece).. [Prof. Guennadi A. Sobolev, Seismological Institute, Joint Institute of Physics of the Earth, Russian Academy of Sciences, Molodezhnaya, 3, Moscow 117 296,

RUSSIA; E-mail: sobolev@wdcb.rssi.ru;
Tel: 7 095 930 0546/254 2478; Fax: 7 095 930
5509]

W20 Thermal Regimes in the Continental and
Oceanic Lithosphere. Conveners: C. Clauser
(Germany), V. Cermak (Czech Republic), M.
Yamano (Japan). [Dr. Christoph Clauser,
Geowissenschaftliche Gemeinschaftsaufgabe,
NLfB-GGA, Stilleweg 2, D-30655 Hannover,
GERMANY; Tel: 49 511 643 3538; E-mail:
clauser@gate1.bgr.d400.de; Fax: 49 511 643
3665/2304]

W21 Reducing Earthquake Losses in the
Eastern Mediterranean Region (Co-Sponsored
by UNESCO). Conveners: W. Hays (USA), B.
Feigner (France), M.W. Jaradat (Jordan), E.
Ibrahim (Egypt), J. Drakopoulos (Greece), D.
Papanastasiou (Greece). [Dr. Walter W. Hays,
U.S. Geological Survey, Climate/Hazards
Team, 955 National Center, Reston, VA
20192, USA; Tel: 1 703 648 6711; Fax: 1 703
648 6747; E-mail: whays@usgs.gov]

W22 Tsunami Sources. Conveners: C.
Koutitas (Greece), V.K. Gusiakov (Russia), F.
Imamura (Japan), S. Tinti (Italy), G.A.
Papadopoulos (Greece). [Prof. Christoforos
Koutitas, Division of Hydraulic and
Environmental Engineering, Department of
Civil Engineering, University of Thessaloniki,
GR-54006 Thessaloniki, GREECE; Tel: 30 31
995701; E-mail: christopoulo@geo.auth.gr;
Fax: 30 31 995658]

W23 Exploiting Massive Seismological Data
Sets: Theory and Practice. Conveners: R.
Snieder (The Netherlands), P. Malischewsky
(Germany), G. Nolet (USA), D.
Panagiotopoulos (Greece). [Dr. Roel Snieder,
Department of Theoretical Geophysics,
University of Utrecht, Budapestlaan 4, P.O.
Box 80.021, 3508 TA Utrecht, THE
NETHERLANDS; Tel: 31 30 253 5087/5086;
E-mail: snieder@geof.ruu.nl; Fax: 31 30 253
3486]

PUBLICATIONS

Doornbos, D.J. (Editor). *Seismological
Algorithms*, Academic Press, London, U.K.,
469 pp, 1988.

Lee, W.H.K. (Editor). *IASPEI Software
Library*, Seismological Society of America, El
Cerrito, CA, U.S.A., v. 1-5, 1989-1993.

Kulhánek, O., *Anatomy of Seismograms*,
Elsevier Science Publishers, The Netherlands,
188 pp., 1990.

Kennett, B.L.N. (Compiler and Editor).
IASPEI 1991 Seismological Tables,
Bibliotech, Canberra, Australia, 167 pp., 1991.

Sato, H. (Editor). Special Issue. *Scattering and
Attenuation of Seismic Waves*, Proceedings of
the IASPEI Symposium held during the 25th
General Assembly in Istanbul, Turkey, *Physics
of the Earth and Planetary Interiors*, v. 67,
1991.

Wyss, M. (Editor). Special Issue. *Earthquake
Prediction*, selected papers from the IASPEI
Symposium held during the 25th General
Assembly in Istanbul, Turkey, *Tectonophysics*,
v. 193, 1991.

Cermak, V. (Editor). Special Issue. *Forward
and Inverse Problems in Geothermal
Modelling*, Proceedings of the IASPEI
Symposium held during the 25th General
Assembly in Istanbul, Turkey, *Tectonophysics*,
v. 194, 1991.

Scholz, C.H., and Mikumo, T. (Editors).
Special Issue. *Modelling the Earthquake
Source*, Proceedings of the IASPEI
Symposium held during the 25th General
Assembly in Istanbul, Turkey, *Tectonophysics*,
v. 197, 1991.

Wyss, M. (Editor). *Evaluation of Proposed
Earthquake Precursors*, American Geophysical
Union, Washington, D.C., U.S.A., 94 pp.,
1991.

Shimamura, H. (Editor). Special section,
Structure and Processes of Active Margins,
Proceedings of the IASPEI Symposium held
during the 25th General Assembly in Istanbul,
Turkey, *Tectonophysics*, v. 201, 1992.

Iwan, W.D. (Editor). *The Effects of Surface
Geology on Seismic Motion*, Proceedings of
the IASPEI/IAEE International Symposium
held in Odawara, Japan, Association for
Earthquake Disaster Prevention, Tokyo, Japan,
v. 1, 355 pp., v.2, 517 pp., 1992.

Hurtig, E., and Haack, H. (Editors).
Geothermal Atlas of Europe, Rudolf Muller
International Booksellers, Amsterdam, The
Netherlands, 36 maps, 156 pp., 1992.

Ebinger, C.J., Gupta, H.K., and Nyambok, I.O.
(Editors). Special Issue. *Seismology and*

Related Sciences in Africa, selected papers from the IASPEI Regional Seismological Assembly held in Nairobi, Kenya, August 1992, *Tectonophysics*, v. 209, 1992.

Ohnaka, M. (Editor). Special Issue. Earthquake Source Physics and Earthquake Precursors, Proceedings of the IASPEI sponsored Symposium held in Tokyo, Japan, November, 1990, *Tectonophysics*, v. 211, 1992.

Poirier, J.-P., and Ahrens, T.J. (Editors). Special Issue. Physical Properties of the Earth's Interior: Mantle to Core, Proceedings of the IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Physics of the Earth and Planetary Interiors*, v. 74, 1992.

Giardini, D. (Editor). Special Issue. Lateral Heterogeneity and Earthquake Location, Proceedings of the IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Physics of the Earth and Planetary Interiors*, v. 75, 1992.

Lewis, T. (Editor). Special Issue. Climatic Change Inferred from Underground Temperatures, Paleogeography, Paleoclimatology, Paleocology, v. 98, *Global and Planetary Change*, v.6, 1992.

Ranalli, G. (Editor). Special Section. Heat Flow, Rock Mechanics, and Seismicity, Proceedings of the IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Tectonophysics*, v. 217, 1993.

Duda, S.J., and Yanovskaya, T.B. (Editors). Special Section. Estimation of Earthquake Size, Proceedings of the IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Tectonophysics*, v. 217, 1993.

Sowerbutts, W.T.C., and Plesinger, A. (Editors). Special Issue. Analysis and Interpretation of Digital Seismograms, Proceedings of the IASPEI Workshop held during the 26th General Assembly in Vienna, Austria, *Computers & Geosciences*, v. 19, 1993.

Green, A.G., Kröner, A., Götze, H.-J., and Pavlenkova, N. (Editors). Special Issue. Plate Tectonic Signatures in the Continental Lithosphere, Proceedings of the IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Tectonophysics*, v. 219, 1993.

McGuire, R.K. (Editor). IDNDR Monograph. The Practice of Earthquake Hazard Assessment, IASPEI/European Seismological Commission, 284 pp., 1993.

Parrot, M., and Johnston, M.J.S. (Editors). Special Issue. Seismo-Electromagnetic Effects, Proceedings of the IAGA/IASPEI Symposium held during the 26th General Assembly in Vienna, Austria, *Physics of the Earth and Planetary Interiors*, v. 77, 1993.

Clowes, R.M. and Green, A.G. (Editors). Special Issue. Seismic Reflection Probing of the Continents and Their Margins, Selected papers from the 5th International Symposium held at Banff, Canada, 6-12 September 1992, *Tectonophysics*, v. 232, 1994.

Bolt, B.A. and Amirbekian, R. (Editors). Proceedings of the International Conference on Continental Collision Zone Earthquakes and Seismic Hazard Reduction held at Yerevan-Sevan, Armenia, 1-6 October 1993, 258 pp., 1994.

Gupta, H. and Chadha, R.K. (Editors). Selected papers from the IASPEI Workshop on Induced Seismicity held during the 27th General Assembly in Wellington, New Zealand, *Pure and Applied Geophysics*, v. 145, 1995.

Franck, S. and Ahrens, T. (Editors). Special Issue. Structure, Composition and Evolution of the Earth's Interior, Proceedings of IASPEI/SEDI Symposia held during the 27th General Assembly in Wellington, New Zealand, *Physics of the Earth and Planetary Interiors*, v. 92, 1995.

Cermak, V. and Rybach, L. (Editors). Special Issue. Geothermal Aspects of Lower Crustal Structure, Heat Flow and Hydrothermal Circulation, Proceedings of the IASPEI Symposium held during the 27th General Assembly in Wellington, New Zealand, *Tectonophysics*, v. 257, 1996.

Reyners, M. and Hasegawa, A. (Editors). Special Issue. Subduction Zones and Back Arc Basins, Proceedings of the IASPEI Symposium held during the 27th General Assembly in Wellington, New Zealand, *Physics of the Earth and Planetary Interiors*, v. 93, 1996.

Schenck, V. (Editor). Earthquake Hazard and Risk, Papers selected by the Sub-Commission

on Earthquake Hazard and Risk from Symposia and Workshops held during the 27th General Assembly in Wellington, New Zealand, Kluwer series "Advances in Natural and Technological Hazard Research" No. 6, Kluwer Academic Publishers, Dordrecht-Boston-London, 287 pp., 1996.

Engdahl, E.R., Castano, J.C., Berrocal, J., (Editors). Special Issue. Selected papers from the 1994 Regional Seismological Assembly in South America held in Brasilia, Brazil, Geofisica Internacional, v. 35, 1996.

Young, J.B., Presgrave, B.W., Aichele, H., Wiens, D.A., and Flinn, E.A., Special Issue. The Flinn-Engdahl Regionalisation Scheme: The 1995 Revision, Physics of the Earth and Planetary Interiors, v. 96, 1996.

Anderson, O.L., Jackson, I. (Editors), Special Issue, Thermoelastic Properties of Deep Mantle Phases, Proceedings of the IASPEI Workshop held during the 28th General Assembly in Boulder, USA, Physics of the Earth and Planetary Interiors, v. 98, 1996.

FORTHCOMING MEETINGS

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

1996 December 9-20
CDC/IDNDR WORKSHOP ON SEISMIC
AND OTHER GEOPHYSICAL
INSTRUMENTATION
Hyderabad, INDIA

Dr. C.V.R.K. Rao, National Geophysical
Research Institute, Hyderabad 500007, INDIA
(Tel: 91 40 6701411; Fax: 91 40 671564;
E-mail: harsh@csngri.ren.nic.in /
director@ngri.globemail.com)

1997 January 19-24
IAVCEI GENERAL ASSEMBLY
Puerto Vallarta, MEXICO
Instituto de Geofisica, Ciudad Universitaria,
UNAM, D.F., C.P. 04510, MEXICO (E-mail:
iavcei97@tonatiuh.igeofcu.unam.mx; WWW:
<http://charro.igeofcu.unam.mx/iavcei97/>; Fax:
525 550 2486)

1997 February 25-28
INTERNATIONAL WORKSHOP ON
SCIENTIFIC USE OF SUBMARINE
CABLES
Okinawa, JAPAN
Hisashi Utada, Organizing Committee

Secretariat, Earthquake Research Institute,
University of Tokyo, Yoyoi 1-1-1, Bunkyo-ku,
Tokyo 113, JAPAN (Tel: 813 3816 3795;
E-mail: utada-sun.eri.u-tokyo.ac.jp; Fax: 813
5689 7234)

1997 March 23-27
EUROPEAN UNION OF GEOSCIENCES
Strasbourg, FRANCE
EUG 9 Office, EOPG, 5 rue Rene Descartes,
67084 Strasbourg Cedex, FRANCE (Tel: 33 3
88 41 63 93/45 01 91; Fax: 33 3 88 60 38 87;
E-mail: eug@eopg.u-strasbg.fr)

1997 April 14-18
PLUMES, PLATES AND
MINERALIZATION
Pretoria, South Africa
S. de Waal (Tel: 27 12 4202454; Fax: 27 12
433430; E-mail: ppm97@scientia.up.ac.za)

1997 April 21-25
22ND EGS GENERAL ASSEMBLY
Vienna, AUSTRIA
EGS Office, Max-Planck-Str. 1, 37191
Katlenburg-Lindau, GERMANY (Tel: 49
5556 1440; Fax: 49 5556 4709; E-mail:
egs@linax1.mpae.gwdg.de; WWW:
<http://www.mpae.gwdg.de/EGS/>)

1997 April 23-May 3
5TH IAHS SCIENTIFIC ASSEMBLY
Rabat, MOROCCO
IAHS SA5-97 Organizing Committee,
Direction Generale de l'hydraulique, Casier
Rabat-chellah, MOROCCO (Tel: 212 7
769008/778742; Fax: 212 7 778696)

1997 May 27-30
AGU SPRING MEETING
Baltimore, MD, USA
AGU Meetings Dept., 2000 Florida Ave.,
Washington, DC 20009, USA (Tel: 1 202 462
6900)

1997 June 15-July 5
WORKSHOP ON MATERIALS AT HIGH
PRESSURE
Aspen, Colorado, USA
(Application forms and information on WWW
at <http://andy.bu.edu/aspen> and
<http://granite.ciw.edu/aspen/aspen.htm>)

1997 July 1-9
IAMAS & IAPSO JOINT ASSEMBLIES
Melbourne, AUSTRALIA
IAMAS/IAPSO Secretariat, Convention
Network, 224 Rouse St., Port Melbourne,
Victoria 3207, AUSTRALIA (Tel: 61 3 9646

4122; Fax: 61 3 9646 7737; WWW:
<http://www.dar.csiro.au/pub/events/assemblies/>;
E-mail: mscarlett@peg.apc.org

1997 August 4-15
8TH IAGA SCIENTIFIC ASSEMBLY
Uppsala, SWEDEN
Swedish Institute of Space physics, Uppsala
University, and Swedish Geological Survey
(Tel: 46 18 303600; Fax: 46 18 403100;
WWW URL: http://www.irfu.se.iaga_97.html;
E-mail: iaga@irfu.se)

1997 August 11-14
FOURTH INTERNATIONAL SYMPOSIUM
ON ROCKBURSTS AND SEISMICITY IN
MINES
Krakow, POLAND
S.J. Gibowicz, Institute of Geophysics, Polish
Academy of Sciences, ul. Ks. Janusza 64, 01-
452-Warszawa, POLAND (Tel: 48 22 379287;
E-mail: gibowicz@igf.edu.pl; Fax: 48 22
370522)

1997 August 14-16
6TH EUROPEAN WORKSHOP ON THE
NUMERICAL MODELING OF MANTLE
CONVECTION AND LITHOSPHERIC
DYNAMICS,
Naurod, GERMANY
H. Harder (E-mail: [hfh@willi.uni-
geophys.gwdg.de](mailto:hfh@willi.uni-geophys.gwdg.de))

1997 August 18-28
29TH IASPEI GENERAL ASSEMBLY
Thessaloniki, GREECE
Secretariat, Geophysical Laboratory,
University of Thessaloniki, GR-540 06,
Thessaloniki, GREECE (Tel: 30 31 998526;
Fax: 30 31 998528; E-mail:
IASPEI@geo.auth.gr; WWW:
<http://www.csd.net/~bergman/iaspei/>).

1997 September 3-9
IAG SCIENTIFIC ASSEMBLY
Rio de Janeiro, BRAZIL
IAG97 - Dr. Denizar Blitzkow, EPUSP-PTR,
Caixa Postal 61548, 05424-970 Sao Paulo - SP
- BRAZIL (E-mail: iag97@org.usp.br; Tel: 55
11 818 5501; Fax: 55 11 818 5716 / 211 4308)

1997 September 22-27
INTERNATIONAL SEMINAR ON
ASSESSMENT AND MITIGATION OF
SEISMIC RISK IN THE CENTRAL
AMERICAN AREA
San Salvador, EL SALVADOR
Ing. Patricia Mendez de Hasbun, Dpto. de
Ingenieria Civil, Universidad

Centroamericana,
"J.S. Canas", Apartado Postal (01) 168, San
Salvador, EL SALVADOR (Fax: 503 273
8140/1010); Dr. J. Bommer, Dept. of Civil
Engineering, Imperial College, London, SW7
2BU, UK (j.bommer@ic.ac.uk)

1997 October 5-9
5TH INTERNATIONAL CONGRESS OF
THE BRAZILIAN GEOPHYSICAL
SOCIETY
Sao Paulo, BRAZIL
Depto. de Geofiscia - IAG-USP, Caixa Postal
9638, 01065-970 Sao Paulo - SP - BRAZIL
(WWW: <http://www.usp.br/iag/geofisica/>;
E-mail: cisbgf@iag.usp.br; Fax: 55 11 818
4753)

1997 October 10-13
CONTINENTAL ROOTS: AN
INTERDISCIPLINARY WORKSHOP
Cambridge, MA, USA
Organized by IASPEI-IAVCEI Inter-
Association Commission on Physical and
Chemical Properties of Earth Materials
W.F. McDonough and R.D. van der Hilst
(E-mail: mcdonough@eps.harvard.edu)

1998 April 20-24
22RD EGS GENERAL ASSEMBLY
Acropolis, Nice, FRANCE
EGS Office, Max-Planck-Str. 1, 37191
Katlenburg-Lindau, GERMANY (Tel: 49
5556 1440; Fax: 49 5556 4709; E-mail:
egs@linax1.mpae.gwdg.de; WWW:
<http://www.mpae.gwdg.de/EGS/>)

1999 JULY 19-30
22ND IUGG GENERAL ASSEMBLY
Birmingham, UK