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NEWSLETTER No. 28 - MARCH 1991

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

As the Vienna General Assembly approaches and preparations are proceeding, I would like to remind those who receive this Newsletter, particularly National Correspondents, that they should make every effort to ensure that information in the Newsletter is distributed as widely as possible among their colleagues. You will see from the Association accounts published here, that we keep our administrative costs very low, in order to support scientific activities to the fullest extent. We therefore do not distribute the Newsletter directly to all interested scientists, but rely on recipients to pass information to colleagues.

I look forward to seeing as many of you as possible in Vienna.

Robin Adams

R D Adams
Secretary-General

OBITUARY - ACADEMICIAN V.V. BELOUSSOV

We were all saddened to learn of the death, on 25 December 1990, of Professor V V Belousov, an earth scientist of the broadest interests and vision. For many years he played a leading role in international and Soviet geophysics, being largely responsible for the International Geophysical year (1959-61), and also President of the Soviet Geophysical Committee. He was President of IUGG from 1960 to 1963, and about this time was also the leader of several Unesco-sponsored missions to evaluate seismological requirements in developing areas.

His wise and friendly influence will be missed throughout the geophysical community.

FLINN AWARD

The American Geophysical Union has established an annual "Flinn Award" in memory of Edward A Flinn, who died so tragically in 1989. The award is to recognise those "unsung" people who through their roles as facilitators and co-ordinators contribute to the advancement of geophysical research. Ted Flinn, in his life and work, exemplified this concept by his dedication to the ideal of AGU's motto, "unselfish co-operation in research". The first Flinn Award will be presented at the AGU's 1991 Spring Meeting.

GENERAL ASSEMBLY, VIENNA 11 - 24 AUGUST 1991

The Third Circular, with details of all sessions and convenors, is now available. Please note that the Local Organizing Committee has moved from Vienna, and its address is now:

IUGG 91 Local Organizing Committee
c/- Prof. H Stünkel
Dept of Mathematical Geodesy
Steyrergasse 30
A-8010 GRAZ
AUSTRIA

Tel: +43 316 873 6346
Fax: +43 316 813247
Telex: 311221 TUGRZ A

The official organizer for travel, accommodation and registration is:

AUSTROPA
Box 30
A1010 Vienna
AUSTRIA

Tel: +43 222 588 00/0
Fax: +43 222 568533
Telex: 111 222

The date for receipt of abstracts was 1 March 1991, but any enquiries about late abstracts should be addressed to the convenor of the session concerned, or to:

Dr B Hofmann-Wellenhof
Institute of Applied Geodesy
Steyrergasse 30
A-8010 Graz
AUSTRIA

Full details of IASPEI scientific sessions have been circulated in Newsletter 27, as well as being contained in the Third Circular. Please note that the address of the convenor of Symposium 8 "Heat Flow", Rock Mechanics and Seismicity" is:

Prof. G Ranalli,
Institut fuer Mineralogie und Petrographie
ETH-Zentrum
CH-8002 Zurich
SWITZERLAND

and not the Canadian address given in the Third Circular.

BUSINESS SESSIONS

IASPEI will hold two open Plenary Sessions during the Assembly, at which all interested scientists are welcome, but in the event of voting being necessary on administrative matters, only accredited national representatives will be allowed to vote.

Under our statutes any matter may be discussed with the agreement of a majority of those present, but preliminary agendas are as follows:

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

President's Welcome
Presentation of Accounts
Appointment of: Resolutions Committee
 Audit Committee
Presidential Address

The meeting will be followed by an Association Lecture - details of which will be announced later.

Second Plenary Session, Wednesday 21 Aug., evening

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

The first session on the opening morning will comprise a minimum of administrative activity and will primarily be dedicated to the Presidential Address, followed by the Association lecture.

The second session on the Wednesday evening of the second week, will be the main business session at which the Association's past activities and future plans will be discussed. The election of officers will also take place at this meeting. A Nominating Committee, already set up, will put forward proposals for officers. The Committee comprises: Prof. Z Suzuki (Chairman), Prof. H Berckhemer, Prof. B A Bolt, Prof. A.D Gvishiani and Prof. E G Kausel. Those wishing to make suggestions should contact a member of the committee either before the Assembly or during its early part.

IUGG CHRONICLE

After 33 years, Georges Laclavere has relinquished the post of Editor of IUGG Chronicle. Throughout this time he has produced a complete and valuable record of the activities and achievements of the Union and its Associations, for which we are all grateful. The editorship has been taken over by the present Secretary-General of IUGG, Professor Paul Melchior, and all further correspondence relating to the Chronicle should from now on be sent to him at the Royal Observatory, Brussels.

IASPEI 1991 SEISMOLOGICAL TABLES

These new tables, designed for use in global earthquake location and seismic phase association, have been developed from the work of the IASPEI Subcommittee on Earthquake Algorithms with support from IASPEI, Unesco and the U.S. Air Force Geophysical Laboratory. The Editor and Compiler is Prof. B L N Kennett.

The tables are derived from a radially stratified velocity model iasp91, which is represented in parametric form as polynomials in radius. They are published as a 170 page book, by the Research School of Earth Sciences, Australian National University, and comprise:

- (i) Travel time tables at 1° intervals for P and S out to 125°, at a range of depths from 0 to 700km, and tables for PcP, ScS, ScP, PKP, SKS, SKP for appropriate distance ranges.
- ii) Differential time tables at 1° intervals for pP-P, sP-P, sS-S, pS-S.
- iii) Summary tables giving expected phases with times and slowness at 2° intervals from 0 to 180°, and a range of depths.
- iv) Ellipticity Correction Tables at 5° intervals for main phases, and a range of depths derived from the 1976 formulation of Dziewonski and Gilbert.
- v) The iasp91 velocity model in parametric form.

The book is available at a price of A\$14 (mailing A\$5 surface, A\$9 airmail), from: Bibliotech, ANUtech Pty Ltd., G.P.O. Box 4, Canberra, ACT 2601, Australia. Fax: +61 6 257 5088. Payment by major credit cards is accepted.

These tables will be subject to careful study and experimental use before the Vienna Assembly, where they will be discussed fully by the Subcommittee on Algorithms and other appropriate groups.

HAZARDS 91 PERUGIA, 4-8 August 1991

This international symposium on Geophysical Hazards in Developing Countries and their Environmental Impacts was originally scheduled for 21-27 April 1991, at Cairo, but due to the international situation will now take place 4 - 9 August, 1991 at Perugia in Italy.

The deadline for abstracts is now 1 April 1991; these should be sent to Dr T S Murty, Institute of Ocean Sciences, Box 6000, West Saanich Road Sidney, B.C., V8L 4B2, Canada (Tel: +1 604 363 6311; Fax +1 604 363 6746). The meeting is immediately before the IUGG Assembly in Vienna, and travel/accommodation packages are available to take in both meetings.

XXVII GENERAL ASSEMBLY IASPEI 1994

Likely dates for this Assembly, to be held at Wellington, New Zealand, are January 10-21.

EARTHQUAKE SOURCE PHYSICS AND EARTHQUAKE PRECURSORS

This highly successful international symposium was held at the University of Tokyo, 19-22 November 1990, with co-sponsorship from IASPEI, the Japanese National Committee for Seismology and Physics of the Earth's Interior, the Science Council of Japan and the Seismological Society of Japan.

Its objectives were to update physical understanding of earthquake rupture, the physical modelling of earthquake nucleation and to discuss how earthquake precursors can be viewed in terms of physical models.

Key topics addressed included:

- . heterogeneities of fault and seismogenic zones
- . physical properties of fault zone materials
- . stress accumulation and restrengthening at plate and fault boundaries
- . physical modelling of earthquake nucleation to instability
- . dynamic rupture processes
- . precursors associated with nucleation

The extension of prediction studies to this physical stage, beyond merely empirical studies, has been most fruitful and will have great relevance to the International Decade for Natural Disaster Reduction.

The Symposium was attended by a large number of international workers in the fields of rock physics, seismology and geology. A book of nearly 50 extended abstracts has already been produced, and the full proceedings will be published as a special volume of Tectonophysics, under its arrangement with IASPEI.

STUDY OF THE EARTH'S DEEP INTERIOR

The Union SEDI Committee will hold a meeting at the Vienna Assembly on the evening of Monday, 19 August, following the Union Symposium U6, Dynamics of the Earth's Deep Interior and Earth Rotation. The meeting will discuss current and planned activities and elect new officers for 1991-1995.

SEDI has continued to prosper since its formation in 1987, and has arranged symposia at Blanes, Spain in June 1988, Exeter, UK in July 1989 and at Santa Fe, New Mexico in August 1990. These meetings have been of broad scientific interest, cutting across the usual scientific divisions between the Union's Associations. The Santa Fe meeting is reported in EOS of 5 February, 1991, which reviews the main topics discussed:

- . the main geomagnetic field
- . structure of the core and lower mantle
- . mineral physics
- . paleomagnetic secular variation
- . core-mantle coupling and length of the day
- . core surface fields and motions
- . core dynamics and geodynamic theory

A further symposium is being planned for the middle of 1992 in Japan with the suggested topic "Lateral heterogeneity of the transition between core and mantle".

INTERNATIONAL ASSOCIATION OF SEISMOLOGY AND PHYSICS OF THE EARTH'S INTERIOR

Financial Report for the Period 1987 - 1990

Amounts in US Dollars

RECEIPTS	IUGG	GRANTS & CONTRACTS	EXPENDITURE	IUGG	GRANTS & CONTRACTS
15 IUGG ALLOCATION	76 800.00		11 ADMINISTRATION		
2 UNESCO GRANTS		2 000.00	11.1 Personnel	5 099.60	
3 OTHER GRANTS		171 321.64	11.3 Supplies & Equipment	3 448.62	
4 CONTRACTS WITH UNESCO etc		46 400.00	11.4 Communications	10 246.80	
5 SALE OF PUBLICATIONS	20 780.94		11.5 Travel	6 765.21	
6 MISCELLANEOUS	9 473.61		11.6 Miscellaneous	1 978.35	
	<u> </u>	<u> </u>	12 PUBLICATIONS		
7 TOTAL RECEIPTS	107 054.55	219 721.64	12.4 Others	5 136.86	16 400.00
			13 ASSEMBLIES		
			13.1 Organization	5 506.59	
			13.2 Travel	58 911.39	77 521.64
			14 SYMPOSIA & MEETINGS		
			14.1 Organization	2 452.33	
			14.2 Travel	13 817.41	127 300.00
			18 MISCELLANEOUS	28.11	
				<u> </u>	<u> </u>
			19 TOTAL EXPENDITURE	113 391.27	221 221.64
8 CASH IN BANK 1 JAN 87	29 682.05	1 000.00	20 CASH IN BANK 31 DEC 90	22 845.33	
FROM IUGG ACCOUNT		500.00	TO GRANTS ACCOUNT	500.00	
	<u> </u>	<u> </u>		<u> </u>	<u> </u>
10 TOTAL	136 736.60	221 221.64	22 TOTAL	136 736.60	221 221.64

IASPEI FINANCIAL REPORT PERIOD 1987 - 1990

IASPEI held major Assemblies in three of the four years of this period, which together with associated scientific meetings formed the major part of our expenditure.

During the period there have been some significant changes in our sources of income. Unesco has been forced to reduce the level of its direct funding and we received contracts during the period of less than \$47,000, compared with \$71,000 for the previous period, 1983 - 1986. Of the contracts received, almost half were to support the 1987 General Assembly. This reduction has been offset by grants received through ICSU from the US National Academy of Sciences to support activities related to Unesco's Natural Hazards Programme. These grants have totalled \$135,000 for the period, and have enabled the Association to maintain its activities at about the same level.

Full detail of grants income is:

National Academy of Sciences	\$ 135,000
ICSU	15,000
IUGG	6,000
WDC-A (for software)	4,000
ILP and aid organizations	10,521.64
Commercial organizations	800
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	\$171,321.64

Our other significant new source of income is that from royalties from publication of proceedings of IASPEI symposia. Over \$18,000 was received in 1990 for sales arising from the 1987 General Assembly. This source of income is expected to continue, but at varying levels depending on the timing of Assemblies. Proceedings from the 1989 General Assembly are now in press, and a volume containing papers from the 1990 African Regional Assembly is planned. We also receive income from the sale of the Handbook of Algorithms.

Miscellaneous income comprises interest of \$6,733.53, refunds of \$339.82 and an accounting adjustment of \$2,400.26 arising from fluctuations in the exchange rate.

More than \$285,000 or 85% of our total expenditure has been on Assemblies and Scientific Meetings. Administration costs remain low at about 8½% of expenditure.

The sum of \$500 shown as transferred from the IUGG account to the Grants account arises from a final payment still to be received for a Unesco contract.

The Association continues to disburse most of its income, and finished the period with a cash balance of \$22,845.33 which is our usual level of reserve.

FORTHCOMING MEETINGS

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

- 1991 May 27-29 SEISMOLOGY AND EARTHQUAKE ENGINEERING
Tehran, IRAN
Organizing Committee, SEE-1, P.O. Box 19395-3913,
Tehran, IRAN
- 1991 Jun 24-29 EARTHQUAKE PROGNOSTICS
Berlin, GERMANY
Prof. A Vogel, Mathematical Geophysics, Free University
of Berlin, Podbielskiallee 60, D-1000 Berlin 33, GERMANY
- 1991 Aug 9-4 HAZARDS 91
Perugia, ITALY
Dr T S Murty, Institute of Ocean Sciences, Box 600,
West Saanich Road, Sidney, BC, CANADA V8L 4B2
- 1991 Aug 11-24 XX GENERAL ASSEMBLY IUGG
Vienna, AUSTRIA
IUGG Committee, Dept. Mathematical Geodesy, Graz University
of Technology, Steyrergasse 30, A-8010 Graz, AUSTRIA
- 1991 Aug 26-29 4th INTERNATIONAL CONFERENCE ON SEISMIC ZONATION
Stanford, California, USA
Dept. of Civil Engineering, Stanford University, Stanford,
CA. 94305-4020, USA.
- 1991 Sep 2-7 HEAT FLOW AND STRUCTURE OF THE LITHOSPHERE
Bechyne, CZECHOSLOVAKIA
Dr. V Cermak, Geophysical Insitutute, Bocni II, cp 1401,
14131 Prague, Sporilov, CZECHOSLOVAKIA
- 1991 Sep 18-20 EARTHQUAKE, BLAST AND IMPACT
London, U.K.
Conference Officer, Inst. Civil Engineers, 1-7 Great
George Street, London SW1P 3AA, U.K.
- 1991 Oct 15-18 EARTHQUAKE PREDICTION: STATE OF THE ART
Strasbourg, FRANCE
CSEM, 5 rue Rene Descartes, F-67084 Strasbourg, Cedex
FRANCE
- 1991 Oct 23-26 SEISMICITY IN EASTERN ASIA
HONG KONG
Dr K W Lee, Charles Haswell & Partners, 3/F Bay Tower,
2-4 Sunning Road, Causeway Bay, HONG KONG
- 1991 Nov 20-23 PACIFIC CONFERENCE ON EARTHQUAKE ENGINEERING
Auckland, NEW ZEALAND
NZ National Society for Earthquake Engineering, Box 17-268,
Wellington, NEW ZEALAND
- 1992 Jul 19-25 10th WORLD CONFERENCE ON EARTHQUAKE ENGINEERING
Madrid, SPAIN
IOWCEE, C/O Tilesa, Londres 39-1°B, 28028 Madrid, SPAIN
- 1992 Sep 6-12 5th INTERNATIONAL SYMPOSIUM ON SEISMIC REFLECTION PROFILING
OF THE CONTINENTAL LITHOSPHERE
Banff, CANADA
Dr R Clowes, Rm 357, Geological Sciences, 6339 Stores Road,
University of British Columbia, Vancouver, CANADA V6T 2B4.
- 1994 Jan 27th GENERAL ASSEMBLY, IASPEI
Wellington, NEW ZEALAND