

# Newsletter

number 22 December 1988

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## Contents

Mainz council meeting highlights  
IAGC's report to IUGS  
Current individual membership status

IAGC-sponsored meetings  
Other meetings of interest  
General Assembly

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### Mainz council meeting highlights

For a variety of reasons, it was necessary to cancel the scheduled Council meeting at Pocos de Caldas, Brazil, as reported in Newsletter 21.

Council convened its 1988 annual meeting in the Hauptgebäude (Main Building) of the Max Planck Institute, Mainz, FRG, on September 8, 1988. The Vice-President, Dr. Heinrich Wanke, welcomed Council to his institute.

The minutes of the Zurich council meeting (highlights of which appeared in Newsletter 21) were approved as compiled by the Secretary. Among the items of business arising from the minutes were the approval of the European Association of Geochemistry as an Associated Society of IAGC, and agreement to publicize IAGC and its journal Applied Geochemistry through exchange of information with the Geochemical Society of Japan and publications of notices in appropriate geochemical journals.

The President (Dr. M. Grunenfelder) outlined the scope of his forthcoming report to IUGS, the highlights of which appear elsewhere in this Newsletter, which

include a 4-year review of activities. New National members were Czechoslovakia and The Netherlands. Romania continues to express interest, as does Austria.

At the time of the Council meeting the Secretary (Dr. B. Hitchon) reported individual members at 622, down from the previous year because many delinquent members had been carried for two years. The recently printed Membership Directory 1988 reflects only paid-up members at the beginning of 1988. Of the 622 individual members, 83% subscribe to Applied Geochemistry. Membership status at 1988-12-31 is given elsewhere in this Newsletter.

The Treasurer (Dr. E.E. Angino) provided a financial statement at 1988-06-30, which showed a balance of \$35,636.60, including \$10,478.29 in the Ingerson Fund and \$1,697.26 in the Journal Sinking Fund. A current financial statement at 1988-12-31 follows.



## Financial statement

### IAGC Statement of income and expenses (US\$)

1988-01-01 to 1988-12-31

Beginning balance, January 1, 1988 .....\$38,516.55

#### *Income:*

National Member dues .....\$ 4,330.00

Individual Member dues ..... 4,692.97

Interest on investments ..... 2,491.24

UNESCO payment ..... 200.00

IUGS 1987 payment ..... 3,000.00

.....\$14,714.21

#### *Expenses:*

Postage and duplication .....\$ 134.48

Secretarial and accounting ..... 140.00

Telex and cable charges ..... 97.50

Tax preparation ..... 110.50

Bank charges ..... 67.60

Thermodynamics Conference .....2,000.00

Ingerson Lecture – Ringwood .....3,712.00

IGC – Booth ..... 450.00

Mainz meeting .....1,515.12

WRI-6 Conference .....2,000.00

Sao Paulo Meeting .....1,859.00

Pergamon memberships ..... 85.00

**Total expenses** .....\$12,171.20

Excess income over expenses .....\$ 2,543.01

**Cash balance as of December 31, 1988** ....\$41,059.56

Chequing account 1988-12-31 .....\$12,421.46

Certificate of Deposit ..... 9,000.00

Ingerson Fund\* .....14,231.42

Journal Sinking Fund ..... 5,406.68

.....\$41,059.56

\* Less \$3712.00 owed chequing account when CD matures (Dr. Ringwood).

The reports of the chairmen of the Working Groups indicated that several were involved with preparations for the 28th IGC, and some for their own symposia to be held in 1989 and 1990. During the reporting period the Working Group on Thermodynamics of Natural Processes held a very successful First International Symposium on Thermodynamics of Natural Processes at Strasbourg, France, attended by 96 geochemists from 16 countries. Professor I.L. Khodakovsky was re-elected Chairman until 1992. It was proposed that the Second International Symposium on Thermodynamics of Natural Processes be held in the USA in 1992, in close association with WRI-7.

The Chairman of the Publications Committee (Dr. A.A. Levinson) noted that although there had been some delays in the 1987 publication schedule of Applied Geochemistry, the first three issues for 1988 (volume 3) appeared in rapid succession in the early summer; volume 3, number 4 was a special issue honouring V.M. Goldschmidt and was on time. Subsequent issues continued on schedule.

The Nominating Committee comprised Professor S.R. Taylor (Chairman), Dr. V.L. Barsukov (Past-President), Dr. R.O. Fournier, Dr. K.S. Heier and Professor H. Sakai, and presented their report to Council for consideration. After very considerable discussion, and correspondence following the Council meeting, the slate of candidates for the 1989-1992 Council to be presented to the General Assembly was approved, and is listed elsewhere in this Newsletter.

Council agreed to accept a proposal that Professor L.H. Ahrens (Vice-President 1967-1972, President 1972-1977) be elected an Honorary Fellow of IAGC.

Professor H. Sorensen distributed his report on the ICSU Global Change Program, which Council agreed should be supported through organizing conference(s) on selected aspects. Input of some of the Working Group Chairmen will be sought.

Approval was given for expenditure of about \$3000 for the IAGC booth at the 28th IGC. The cost includes booth rental, preparation of display material, shipping, and expenses for the booth attendant, who will be Mrs. Kathie Skogg, Secretary to Dr. Hitchon. Both Dr. Hitchon and Mrs. Skogg welcome all IAGC members and contributors to Applied Geochemistry to visit the booth.

Council instituted the IAGC Medal, the broad guidelines of which are as follows. The medal will be awarded for major achievements in geochemistry or cosmochemistry, and the recipient is to be internationally outstanding. It will be made of bronze, with an accompanying certificate. The recipient will deliver a lecture at the conference at which the medal is awarded, with the lecture to be published in Applied Geochemistry, although an applied topic is not required. The medal will be awarded from time to time at the discretion of Council, and Council will make the final selections. All members will be informed of the detailed guidelines at a later date.

The final business related to the approval of drafts for the Agenda, Resolutions for Ratification, and Proposed Changes in Statutes, to go before the General Assembly at the 28th IGC. See full details elsewhere in this Newsletter.

## IAGC's report to IUGS

### INTERNATIONAL ASSOCIATION OF GEOCHEMISTRY AND COSMOCHEMISTRY

Highlights of Activities

1984-1988

Prepared for IUGS

#### *Executive Summary*

The period 1984 to 1988 was probably the most dynamic that IAGC has experienced in its 20-year history. Membership increased by one-third for National Members and

more than doubled for Individual Members, in large part due to publication of Applied Geochemistry, the association's new journal, which started in January 1986. Five Newsletters and a Membership Directory were published, 15 symposia supported, and 5 Council meetings held. Cash balance increased from \$16,920 at the end of 1983 to \$35,638 at mid-1988, including a \$10,000 donation to fund the Ingerson Distinguished Lecture Series, and \$1697 in a Journal Sinking Fund.

### Membership

Following a drive for National Members, 8 countries joined IAGC as members, making a total of 24 National Members at the end of 1988. Because of the extremely favourable rates for Applied Geochemistry for individual members of IAGC, individual membership increased from 293 at the beginning of 1985 to 639 at the end of 1988. As a result, despite no change in member dues, the dues from Individual Members exceeded those of National Members for the first time in 1986. The Association of Petroleum Geochemical Explorationists became the second Associated Society, and there are three Honorary Fellows (Louis H. Ahrens, Earl Ingerson and George W. Wetherill).

### Finances

The main features are as follows (US\$):

	1984	1985	1986	1987	1988
					(Nov 30)
<i>Income:</i>					
National Members	4360	2640	3569	4534	4330
Individual Members	2370	1450	3600	6462	4625
IUGS	500	-	1500	1000	3000
UNESCO	4000	-	4500	1300	200
Other	<u>2438</u>	<u>8810*</u>	<u>2488*</u>	<u>6259*</u>	<u>1917</u>
	13668	12900	15657	19555	14072
<i>Expenses:</i>					
Support symposia etc.	7331	11953	9209	9015	6897
Office	<u>718</u>	<u>880</u>	<u>530</u>	<u>546</u>	<u>628</u>
	8049	12833	9739	9561	525
Excess Income over Expenses	5619	67	5918	9994	6547
Cash balance at year-end	22538	22605	28523	38517	45063 <sup>+</sup>

\*Ingerson Fund bequests were \$7500, \$500 and \$2000, for 1985, 1986 and 1987, respectively;

+Journal Sinking Fund was \$1697 at mid-1988

Notes: 1. UNESCO funds are essentially 'flow-through' income

2. Support of symposia etc. includes some publication costs not related to symposia

### Publications

The association's official journal Applied Geochemistry was launched in January 1986 as a bimonthly sister journal to Geochimica et Cosmochimica Acta, also published by Pergamon Press. It has had excellent success, with about 82% of Individual Members subscribing. In addition to research papers, the journal includes proceedings of selected symposia and state-of-the-art reviews. During the period under review five Newsletters were published in a new style with a printed format, and for the first time a Membership Directory was issued. In addition, two historical reviews of IAGC were published (International Association of Geochemistry and Cosmochemistry: A history in Appl. Geochem. 1, 7-14, 1986; The International Association of Geochemistry and Cosmochemistry, in Episodes, 9, 155-159, 1986). The agreement between IAGC and Pergamon Press includes the option for IAGC to purchase half of Applied Geochemistry at a future date; a sinking fund has been set up for this purpose, paid into from Individual Member dues.

### Symposia

IAGC has provided funds directly to 8 symposia run by its Working Groups or other international organizations with which IAGC cooperates and cosponsors meetings. An additional 7 symposia have received IAGC's cosponsorship but no funding. Of the 9 Working Groups of IAGC, only two have not held symposia in the period 1984 to 1988; one of the 9 groups was only formed in 1987. Most of the 15 symposia cosponsored or funded by IAGC have published at least volumes of abstracts, sometimes more complete proceedings.

### Administration

Council meetings have been held in Moscow (1984), Rome (1985), Cambridge (1986), Zurich (1987) and Mainz (1988), being attended by an average of 70% of Council members. One Council member, Dr. Marcello Carapezza (Italy) died in the fall of 1987. Council will have a booth at the 28th IGC in Washington; this is the first time IAGC has been represented at the Exhibits.

### Current individual membership status

Individual membership in IAGC continues to grow at a very satisfactory and steady rate. The status as of 1988-12-31 is as follows:

Australia	20
Austria	5
Belgium	5
Brazil	6
Canada	65
Denmark	6
Egypt	4
Finland	3

France	30
Federal Republic of Germany	16
Iceland	4
India	9
Israel	5
Italy	13
Japan	31
Korea (S)	4
Mexico	4
Netherlands	7
New Zealand	9
Nigeria	3
Norway	8
People's Republic of China	6
Portugal	3
South Africa	3
Spain	11
Sweden	11
Switzerland	10
Tanzania	2
United Kingdom	30
USA	299
Yugoslavia	3

The following countries each have one member: Ecuador, Eire, Indonesia, Kenya, Liberia, Monaco, Pakistan, Philippines, Saudi Arabia, Senegal and Uruguay.

Membership as of 1988-12-31 stands at 646.

#### **IAGC-sponsored meetings**

##### ***Twenty-Eighth International Geological Congress***

1989-07-09/19

Washington, DC, USA

*Contact:* Dr. Bruce B. Hanshaw, Secretary-General, 28th International Geological Congress, P.O. Box 1001, Herndon, Virginia 22070-1001, USA (telephone: (703) 648-6053; telex: 248418)

*Sponsor:* IUGS

*Comment:* IAGC to organize six geochemical symposia

##### ***Sixth International Symposium on Water-Rock Interaction (WRI-6)***

1989-08-03 to 08-12

Malvern, England

*Contact:* Dr. W.M. Edmunds, Secretary-General WRI-6, British Geological Survey, Maclean Building, Crowmarsh Gifford, Wallingford, Oxfordshire, OX10 8BB, England (telephone: 0491 38800, ext. 2293; telex: 849365 HYDROL G)

*Sponsor:* IAGC Working Group on Water-Rock Interaction

*Comment:* Six themes have been selected: Mass transfer modelling and reaction kinetics, Metamorphic and hydrothermal fluid reactions, Geochemistry of the solution-solid interface, Water-rock interaction – a sink and

source for trace constituents?, Geochemical cycles, and Geochemistry in energy and natural resources. The four-day post-session field trip to southwest England, 08-09/12, is titled "290 million years of WRI in southwest England" and includes classic hydrothermal areas of Cornwall, a visit to an active tin mine and to the sites of the British Hot Dry Rock Experiment, and other areas of interest to both sedimentary, marine and environmental geochemists.

##### ***Second International Symposium on Geochemistry of Weathering, Diagenesis and Sedimentary Processes***

1990-06 (first half)

Aix-en-Provence, France

*Contact:* Prof. Daniel Nahon, Secretary-General GWDSP-2, University of Marseille, 13397 Marseille Cedex 13, France

*Sponsor:* IAGC Working Group on Weathering, Sedimentary and Diagenetic Processes

##### ***15th General Meeting of the International Mineralogical Association***

1990-06-28 to 07-03

Beijing, People's Republic of China

*Sponsors:* IMA, IAGC

*Comments:* IAGC-IMA Symposium on "Geochemistry, Mineralogy and Origin of Ore Deposits in Relation to Future Materials".

##### ***International Symposium on Geochemical Prospecting***

1990-08-29/31

Prague, Czechoslovakia

*Contact:* Dr. Frantisek Mrna, Geological Survey UUG, Malostranske nam. 19, 118 21 Praha 1, Czechoslovakia

*Sponsors:* IAGC, AEG and the Geological Survey, Prague

*Comments:* The meeting comprises the 5th IAGC Symposium on Methods of Geochemical Prospecting and the 14th AEG International Geochemical Exploration Symposium. The scientific program consists of four plenary sessions (technogenic geochemistry; geochemical mapping, including ecological aspects; data processing; geochemistry of selected ore systems) and six workshops (panning; biogeochemical research; modelling; teaching; analysis; data bases), plus panel discussions. Pre- and post-symposium excursions will include Sn-W and Au deposits of southern and western Bohemia, and polymetallic ores in Moravia and in neovolcanics of Slovakia. Preregistration deadline 1989-02-15; Abstract deadline 1989-06-30.

##### ***7th International Conference on Geochronology, Cosmochronology and Isotope Geology***

1990-09-24/29

Canberra, Australia

*Contact:* Professor W. Compston, Chairman ICOG-7 Committee, Research School of Earth Sciences, The

Australian National University, GPO Box 4, Canberra 2601, Australia (telephone: 062 49 3406; telegrams: Natuniv; telex: 62693; fax: 062 474639)

*Sponsors:* The Geological Society of Australia, Inc.; IAGC; Research School of Earth Sciences, ANU; Australian Bureau of Mineral Resources, Geology and Geophysics.

*Comments:* Registration is Sunday September 23, following directly on the Third Archaean Symposium in Perth (09-17/21). One joint pre-conference excursion to the Yilgarn of Western Australia will precede the Perth meeting; up to five other major field excursions will be offered either before or after the ICOG scientific sessions. Local field excursions (geological, cultural, tourist) will be offered as mid-point relief on September 26.

### **Other meetings of interest**

#### ***International Conference on Analytical Chemistry***

1989-07-30 to 08-05

Cambridge, England

*Contact:* The Secretary, Analytical Division, Royal Society of Chemistry, Burlington House, London W1V 0BN, England

*Sponsor:* Analytical Division, Royal Society of Chemistry

*Comments:* Includes symposia on chromatography, atomic spectroscopy and general chemical analysis.

#### ***32nd IUPAC Congress***

1989-08-2/7

Stockholm, Sweden

*Contact:* IUPAC, c/o Stockholm Convention Bureau, Box 6911, S-102 39 Stockholm, Sweden

*Sponsor:* International Union of Pure and Applied Chemistry (IUPAC), of which IAGC is an affiliated organization

*Comments:* Of the seven sections, the second is titled "Atmospheric and Marine Chemistry" and the topics to be discussed are atmospheric chemistry, air-sea interface chemistry, marine chemistry, marine biochemistry, and analytical air and sea chemistry.

#### ***Ninth International Clay Conference***

1989-08-28 to 09-02

Strasbourg, France

*Contact:* Dr. Helene Paquet, Secretary-General, 9th International Clay Conference, Institut de Geologie, 1 rue Blessig, F-67084 Strasbourg Cedex, France (telephone: (88) 35.66.03)

*Sponsor:* Association Internationale pour l'Etude des Argilles (AIPEA)

*Comments:* Chairman of the Organizing Committee is Professor Yves Tardy (Chairman, IAGC Working Group on Weathering, Sedimentary and Diagenetic Processes).

Among the proposed topics are geochemistry of clay minerals and thermodynamic approaches to clay-water interactions, clay minerals in soils and weathering, organic matter-clay associations, sediment diagenesis and hydrothermal alterations, and industrial and environmental applications such as waste disposal. The associated field trip is subtitled "clays, castles and wines", and if it is anything like the WRI-2 field trip in 1977, it will be an outstanding success!

#### ***13th International Geochemical Exploration Symposium and 2nd Brazilian Geochemical Congress***

1989-10-01/06

Rio de Janeiro, Brazil

*Contact:* Dr. D.C. Bruni, Executive Secretary, Rio '89 Organizing Committee (XIII IGES-II CBGq), A/C CPRM-LAMIN, Av. Pasteur, 404-Urca, CEP 22292 - Rio de Janeiro, RJ, Brazil (telephone: 55-21 295-5297; telex: 55-21 22685; fax: 55-21 325-6044)

*Sponsors:* The Association of Exploration Geochemists and the Brazilian Geochemical Society

*Comments:* Major themes of the technical program include: enrichment and formation of ore deposits; petroleum exploration geochemistry; applied geochemistry in humid tropical and arid terrains; exploration for precious metals, strategic metals and high technology metals; analytical chemistry; geochemistry of carbonatites and rare earth metals; lead isotope geochemistry and environmental geochemistry. Excursions planned for the pre- and post-symposium periods include: Carajas world-class Fe ore and Mn deposits; Moeda Formation Witswatersrand-type Au; deposits in carbonatites and alkaline complexes; precious metal deposits and chromite-emerald mines; the Taquari/Vassouras potassium deposit in the Sergipe Basin; Campos oil field, Rio de Janeiro, emphasizing applied organic geochemistry; and a one-day excursion to visit analytical laboratories and research centers in the Rio area. There will be eight workshops: applied REE geochemistry; design of geochemical surveys; microcomputer applications; precious metals in laterite; applied biogeochemistry; carbonatite geochemistry; analytical techniques; geochemical exploration techniques for petroleum.

Complete written text and figures (extended abstracts) of the oral presentations must be submitted by May 1, 1989.

#### ***2nd V.M. Goldschmidt Conference***

1990-05-3/5

Hunt Valley, Maryland, USA

*Contact:* Peter Deines, General Chairma VMG-2, Department of Geosciences, Pennsylvania State University, 204 Deike Building, University Park, Pennsylvania 16802, USA

*Sponsor:* The Geochemical Society

**8th International Association on the Genesis of Ore  
Deposits Symposium**

1990-08-12/18

Ottawa, Ontario, Canada

*Contact:* L.M. Cumming, Secretary, 8th IAGOD Symposium, Geological Survey of Canada, 601 Booth Street, Ottawa, Ontario K1A 0E8, Canada (telex: 053-3117)

*Sponsor:* IAGOD, Geological Survey of Canada, Carleton University, University of Ottawa

*Comments:* An International Conference on Mineral Deposit Modelling will be held in conjunction with the 8th IAGOD Symposium.

The scientific program will include invited lectures, oral and poster presentations and field trips covering the following topics: isotope geochemistry of mineral deposits; hydrothermal activity at mid-ocean ridges; mineral deposits in sedimentary rocks; gold deposits; distribution and genesis of metallogenic provinces and epochs. Pre- and post-symposium field trips to various mineral belts in eastern, central, western and northern Canada will be arranged.

Preliminary registration was requested by December 1, 1988; Abstract deadline is January 1, 1990.

## NOTICE OF GENERAL ASSEMBLY

International Association of Geochemistry and Cosmochemistry

**Friday, July 14, 1989, 18:00 h (6:00 p.m.)**

**Washington, DC, USA during 28th IGC**

(exact location to be advised later)

The information contained in this notice will serve as sufficient under the IAGC Statutes.

### Draft Agenda

1. Call to Order
2. Approval of Minutes of General Assembly, Moscow, USSR
3. Business arising from Minutes
4. Report of the President
5. Report of the Secretary
6. Report of the Treasurer
7. Proposed changes in the Statutes
8. Approval of dues
9. Report of the Nominating Committee
10. Increase of Ordinary Councillors to 10
11. Election of Council for 1989-1992
12. Other business
13. Adjournment

### Agenda Item 7

#### Proposed Changes in Statutes

The following proposed changes have been approved by Council and will be submitted to the General Assembly for ratification.

#### Section V.A

*Existing:* The Association may affiliate with appropriate international unions and other international organizations with geochemical interests in order to further the objectives of the Association. Any affiliation sought at the time of organization may be by vote of those present at the organizational meeting. Subsequent ones should be upon recommendation by the Council.

*Proposed:* The Association may affiliate with appropriate international unions and other international organizations with geochemical interests in order to further

the objectives of the Association. Any affiliation *must be approved by Council.*

*Explanation:*

1. Deletes reference in the Statutes to the time of formation of IAGC which is now inappropriate after more than 20 years existence.
2. Puts the power of approving appropriate associations in the hands of Council.

Council Meeting, Rome, 1985  
Minutes, Item 7

#### Section I.C.1

*Existing:* National Members

National organizations, such as committees, societies or academies that have been designated by the Council of the Association as the official representative of

geochemists of those countries and shall be entitled to vote in the General Assembly.

*Proposed:* National Members

National organizations, such as committees, societies or academies that have been designated by the Council of the Association as the official representative of geochemists of those countries and shall be entitled to vote in the General Assembly *provided they are fully paid according to the table in Section II.A.2. National organizations that have been designated by the Council of the Association as the official representatives of the geochemists of their country but which are unable to pay full dues because of currency restrictions shall have their dues set by the Council but shall have no vote. Approval of all non-voting National Members shall rest with the General Assembly.*

*Explanation:*

1. Several countries have active groups of geochemists who wish affiliation with IAGC as National Members, but due to currency restrictions are unable to pay the designated dues.
2. It is to the benefit of both these countries and IAGC, as an international organization, to seek closer liaison.
3. It is proposed to allow the creation of non-voting National Members in countries which have currency restrictions who will pay only nominal dues, currently suggested by Council at \$10.00 US per year (the same as Individual Members).
4. It is proposed that national organizations from countries with currency restrictions which apply for National Member status be granted such status subject to ratification at the next General Assembly.
5. Currently, Brazil, Mexico, Turkey and Zimbabwe are eligible for non-voting National Member status, having applied to IAGC and indicated they are unable to pay full dues.
6. Should this revision of the Statutes be approved, a vote of the General Assembly is required for Brazil, Mexico, Turkey and Zimbabwe to be approved as non-voting National Members.
7. Should this revision of the Statutes be approved, further modifications of the Statutes are required (see below).

Council meeting, Zurich, 1987  
Minutes, Item 5

### **Section II.A.**

*Existing:* General Assembly

1. Final authority and decisions on all matters shall rest with the General Assembly.
2. At a business meeting of the Association, the voting members of the General Assembly shall consist of delegates from National Members. Voting power and dues category of each National Member shall be determined by the Group into which it falls in the following table:

Group	A	B	C	D	E	F
# geochemists represented	<25	26–100	101–250	251–500	501–1000	>1000
Voting Power	1	1	2	2	3	3
Dues (Units)	1	1	4	6	8	10

3. Each National Member *eligible to vote* may be represented at the General Assembly by a number of Delegates not exceeding its voting power. Each National Member may also appoint not more than two Alternates who may take part in the General Assembly, but who have no vote. The Delegates and Alternates must present their credentials to the Secretary in advance of the General Assembly.
4. Representatives of Associated Societies, individual members, or sustaining members may attend meetings and take part in discussions, but shall have no vote.
5. Should it become necessary to take postal ballots between regular meetings, all of the National Members representing their respective countries shall be polled by air mail.

*Proposed:* General Assembly

1. Final authority and decisions on all matters shall rest with the General Assembly.
2. At a business meeting of the Association, the voting members of the General Assembly shall consist of delegates from National Members *fully paid up according to the following table*. Voting power and dues category of each National Member shall be determined by the Group into which it falls in the following table:

Group	A	B	C	D	E	F
# geochemists represented	25	25–100	101–250	251–500	501–1000	>1000
Voting Power	1	1	2	2	3	3
Dues (Units)	1	1	4	6	8	10

3. Each National Member may be represented at the General Assembly by a number of Delegates not exceeding its voting power. Each National Member may also appoint not more than two Alternates who may take part in the General Assembly, but who have no vote. The Delegates and Alternates must present their credentials to the Secretary in advance of the General Assembly.
4. Representatives of *National Members who are not fully paid up according to the above table*, Associated Societies, individual members, or sustaining members may attend meetings and take part in discussions, but shall have no vote.
5. Should it become necessary to take postal ballots between regular meetings, all of the National Members *who are fully paid up according to the above table* representing their respective countries shall be polled by air mail.

## Agenda Item 8

### Approval of Dues

The General Assembly will be asked to approve dues for the period 1989-1992, which Council recommends remain at \$60.00 US per unit per annum for National Members and \$10.00 US per annum for Individual Members. Subject to approval of changes in the statutes Council has recommended annual dues of \$10.00 US for non-voting National Members

## Agenda Item 9

### Election of Council (1989-1992)

#### *Nominating Committee:*

Professor S.R. Taylor (Chairman)  
Dr. V.L. Barsukov (Past-President),  
Dr. R.O. Fournier  
Dr. K.S. Heier  
Professor H. Sakai

#### *Slate for 1989-1992 Council:*

President: Heinrich Wanke (FRG)\*  
Vice-President: Hitoshi Sakai (Japan)  
Secretary: Brian Hitchon (Canada)\*  
Treasurer: Ernest E. Angino (USA)\*  
Past-President: Marc H. Grunenfelder (Switzerland)\*

#### Councillors:

A. Erlank (RSA)  
S.V. Grigorian (USSR)  
Devendra Lal (India)\*  
Stephen Moorbath (UK)\*  
Frantisek Mrna (Czechoslovakia)\*  
E.R. Neumann (Norway)  
James O'Neil (USA)  
M. Ozima (Japan)

\* member of 1984-1989 Council

### **Note: According to the Statues III A.2**

Additional nominations for one or more officers or ordinary members of the Council may be made in writing to the Secretary by two National Members or by 15 or more individual members of the Association not less than 60 days prior to the meeting of the General Assembly.

## Agenda Item 12

### **Honorary Fellows**

According to Statutes IC4, the General Assembly will be asked to ratify the appointment of Professor L.H. Ahrens and Dr. George W. Wetherill as Honorary Fellows.