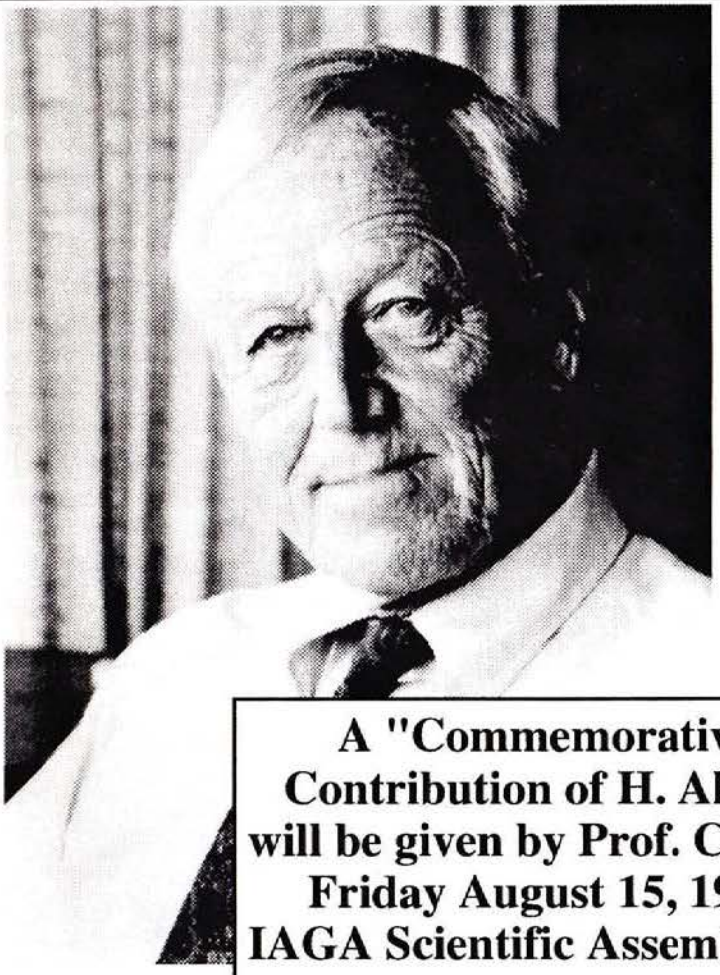
IAGA News

February 1997 No. 36



Hannes Alfvén
(1908-1995)

A "Commemorative Lecture on the Contribution of H. Alfvén to Geophysics" will be given by Prof. C. G. Fälthammar on Friday August 15, 1997 during the 8th IAGA Scientific Assembly in Uppsala, Sweden

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IAGA World Wide Web address
http://www.sec.noaa.gov/IAGA.html

Foreword

Happy 1997! This Issue of IAGA News contains information about the upcoming IAGA Assembly, the highlights of a recent meeting of the Executive Committee, new publications, and other news of interest to the IAGA Community.

Uppsala Assembly, August 4-15, 1997

The 8th Scientific Assembly is the focus of our attention for 1997. Rolf Boström and the people of the Local Organizing Committee are doing an excellent job of arranging the myriad details that accompany this major Assembly. A summary of deadlines and a few updates are on page 4.

IAGA Honorary Members

At their July, 1996, meeting, the IAGA Executive Committee was pleased to unanimously approve the nomination of Dr. Michael Gadsden as an IAGA Honorary Member. The text of his nomination is printed on page 5.

Publications

The *IAGA Guide on Magnetic Measurements and Observatory Practice*, by J. Jankowski and C. Sucksdorff, is now in circulation, and the *IAGA Guide for Magnetic Repeat Station Surveys*, by L.R. Newitt, C.E. Barton, and J. Bitterly is enroute to the Secretary General. Details about these Guides and *Observing Noctilucent Clouds* by M. Gadsden and P. Parviainen, are on pages 7 and 8.

IAGA Co-Sponsorship Of Scientific Workshops And Meetings

While IAGA Assemblies are our primary responsibility, the Executive Committee recognizes that smaller regional and topical meetings have benefits that include in-depth scientific discussions, increased opportunities for student and young scientist participation, and leadership development especially in developing countries. Therefore, the EC has established a procedure to apply for co-sponsorship twice each year, and has increased the budgeted amount to support these meetings. Details, and the format for a request, are given on pages 14-15. The first deadline is 1 March (*extended to 1 April*) for meetings between 1 March 1997 and 28 February 1998.

Deadlines

The next issue of *IAGA News* will be distributed after the Uppsala Assembly. Please submit your reports and new items by the end of October. And please let the Secretariat know of address additions, changes, and deletions.

2001 - the *Next* IAGA Scientific Assembly

We are looking forward to Uppsala, yet already planning for the 1999 IUGG General Assembly in Birmingham, England. But in addition, it is time to arrange the venue for the 9th IAGA Assembly in 2001. Invitations are solicited now for presentation to the Executive Committee in Uppsala in August. Invitations should include the possibility of a joint Assembly with the International Association of Seismology and Physics of the Earth's Interior (IASPEI), which will bring the expected attendance of the meeting to approximately 2000 scientists. Criteria for selecting the successful invitation include adequate lecture facilities for the symposia, reasonable arrangements for housing, the cost of travel to the venue, and the possibilities for financial support of the meeting (thus keeping registration fees at a minimum). The EC will also consider the geographical distribution of past IAGA Assemblies in making a choice. For further instructions regarding the necessary elements of a proposal, please contact the Secretary-General as soon as possible.

IAGA Revenues

Everyone is aware of the competition, worldwide, for governmental financial support. The scientific community has had to accept some share of the reality of shrinking resources. IAGA must seek other avenues of revenues, as must our sister Associations, to maintain our present level of activities. For example, IAVCEI has decided to begin collecting membership fees from individual scientists. This form of voluntary taxation to support their Association has been reasonably successful. The sale of publications is a way to enhance our budget, and IAGA is actively pursuing this tactic. Another is to write proposals to seek funding for special projects; we invite your ideas along these lines. The EC also suggested a way that our constituents can help now – by simply making a cash contribution. IAGA's non-profit tax status allows tax-exempt contributions and could be useful especially to persons paying US taxes.

Therefore, we ask those of you who are able, to contribute $20 or more directly to IAGA. We will gratefully acknowledge your donation, and will recognize donors as benefactors of the Association (unless anonymity is requested). Donations will be used as determined by the Executive Committee; at present a primary concern is the need to provide as much travel assistance as possible to those who would be otherwise unable to come to Uppsala. Please seriously consider this possibility.

Sincerely, Jo Ann Joselyn, IAGA Secretary-General

Updates on the Uppsala Assembly

The Assembly Circular was mailed from Sweden in November. The Uppsala Local Organizing Committee are doing an excellent job and we can look forward to an excellent Assembly. The most recent information, as well as the registration and housing forms, are on the World Wide Web at

http://www.irfu.se/iaga_97.html

The e-mail address for the Local Organizing Committee is

iaga@irfu.se

and their mailing address is IAGA 97, Swedish Institute of Space Physics, S-75591 Uppsala, Sweden. To review the deadlines,

the abstract deadline is **February 28, 1997**
the early (reduced fee) registration deadline is **May 30**
the accommodation booking deadline is **May 30.**

At the time of the last IAGA News, the arrangements for the "Commemorative Lecture on the Contribution of Hannes Alfvén to Geophysics" had not been finalized. Now, we are pleased to announce that this lecture will be given by Professor C.-G. Fälthammar, who was for many years a close collaborator of Professor Alfvén and succeeded his chair at the Royal Institute of Technology. Professor Alfvén's contributions are fundamental to the development of plasma physics, cosmical physics, and many subdisciplines of geophysics. Thus it is quite fitting for IAGA to honor Professor Alfvén on the occasion of our General Assembly held in Sweden. The Lecture will be held at 1:30 PM on the afternoon of Friday August 15th in the HSC building.

We are grateful that Peter Stauning has agreed to become the principal convener for Symposium 2.02, The Use of Imaging Riometers and Related Chemical Models in Studies of the Middle Atmosphere and the Ionosphere, which was to have been convened by Hilkka Ranta. The co-conveners are Esa Turunen and Peter Collis. Dr. Stauning's address is the Danish Meteorological Institute, DK-2100 Copenhagen 0, Denmark; e-mail pst@dmi.min.dk.

A clarification of the Registration Form: each registrant is asked to select a principal affiliation: IAGA, ICMA/IAMAS, or SCOSTEP. We understand that many of you are affiliated with more than one of these. Our purpose is to determine the primary reason why you came to Uppsala, so that we can attribute financial matters proportionately and assess the desirability of joint Scientific Assemblies in the future.

Citation
Dr. Michael Gadsden for IAGA Honorary Membership

It is with great pleasure that we nominate Dr. Michael Gadsden for Honorary Membership in IAGA. Dr. Gadsden served on the IAGA Executive Committee for the twenty-year period 1975-1995. For the last twelve years of this period, 1983-1995, he held the position of IAGA Secretary General. He was instrumental in not only maintaining a high level of excellence for IAGA's Scientific Assemblies but also played a key role in establishing them as the premium international scientific assemblies in IAGA's fields of interest. One of the key elements that has been identified with the success of IAGA Assemblies is the fact that they are developed by the participating scientists in IAGA's Divisions. Dr. Gadsden has been a steadfast promoter and supporter of this concept.

Following the development of the scientific sessions for an Assembly, Prof. Gadsden was responsible for arranging the sessions into a scientific program as well as for coordinating this program with the local organizing committee. He consistently performed this task in an outstanding manner and projected a very positive image of IAGA in the cities around the world that have hosted our Assemblies. At the request of the local organizing committees, he always provided generously his expertise and counsel as they developed the local arrangements for IAGA scientists and their scientific sessions.

Prof. Gadsden also has been an important factor in IAGA's policy to aid both young scientists and those from developing countries. He has worked long and hard to identify funding sources for these participants and has tirelessly fostered their attendance at the Assemblies. He has spent long hours communicating with these scientists before the Assembly and at the Assembly has continued his long hours of effort by providing aid and guidance to them.

In summary, Prof. Gadsden's dedicated, enthusiastic, good-humored, and unselfish efforts on behalf on IAGA have been a vital element in establishing IAGA Scientific Assemblies as among the best international scientific meetings. He has left a strong legacy and deserves Honorary Membership in IAGA.

Donald J. Williams - Past President, IAGA
D. Ian Gough - Past President, IAGA

IAGA Bulletins For Geomagnetic Data

IAGA Bulletin no 32t - Geomagnetic Data for 1989
is now available. This Bulletin contains:
- definitive values of geomagnetic data as prepared by the ISGI Collaborating Institutes; IAGA indices for the current year : aa, am (Km), Kp (ap), Dst, AE, and Rapid Variations: ssc, sfe;
- the monthly and yearly mean values;
- the list of magnetic observatories with the opening and closing dates of operation;
- an introductory text, giving updated indications on the derivation processes, used observatories, and addresses of collaborating Institutes and Data Centers;
- a data diskette

This Bulletin, as well as previous editions in the series may be ordered from the ISGI Publications Office; CETP - 4, avenue de Neptune, 94107 SAINT MAUR CEDEX - FRANCE;
Fax : 33 (1) 48 89 44 33; Tel : 33 (1) 45 11 42 30
Email : ISGI.PUBOFF@cetp.ipsl.fr
The ISGI Publications Office is hosted at the Centre d'etude des Environnements Terrestre et Plantaires (CETP, Saint-Maur, France), under the responsibility of Annick Berthelier and Michel Menvielle.

The prices are as follows (valid in 1997):
IAGA Bulletin no 32 :
1970 to 1980 : each issue 50 FF (about 10 $)
package 1970-1980 (11 Bull.) 400 FF (about 80 $)
1981 to 1987 : each issue (diskettes included) 100 FF (about 20 $)
1988 to 1989 : each issue (diskettes included) 200 FF (about 40 $)
Diskettes alone, for former subscribers only, each 40 FF (about 8 $)

IAGA Manuals and Guides in Print

To order the following publications, contact the IAGA Secretariat: Dr. Jo Ann Joselyn, NOAA R/E/SE, 325 Broadway, Boulder, CO 80303-3328 USA; Fax 1 303 494 0980 or 1 303 497 3645; e-mail: jjoselyn@sec.noaa.gov

IAGA Guide for Magnetic Measurements and Observatory Practice, by J Jankowski and C Sucksdorff; 1996;
Price: $50; 232 pages
ISBN: 0-9650686-2-5

This Guide provides comprehensive information about how to organize and run a magnetic observatory and make magnetic measurements. The main topics are

- Brief description of the magnetic field of the Earth
- Selection of observatory sites and layout
- Magnetometers
- Absolute magnetic measurements
- Recording of magnetic variations
- Data processing
- Testing and calibrating instruments

IAGA Guide for Magnetic Repeat Station Surveys
by L.R. Newitt, C.E. Barton, and J. Bitterly; 1997;
Price: $25; 120 pages
ISBN: 0-9650686-1-7

This Guide provides a comprehensive description of the theoretical basis, operational details, and instrumentation for making magnetic repeat station survey measurements.

Observing Noctilucent Clouds
by M Gadsden and P Parviainen; 1995;
Price: $24.95 (USA) or £9.95 (UK)
ISBN: 0-9650686-0-9
Noctilucent clouds are seen in the summer months, shining in the poleward sky at nighttime. Measurements show that the clouds are higher than any others. Lying at a height of 80-85 kilometers, the clouds mark a boundary between meteorology and space physics.

This manual and instruction book was written by a group of active researchers, both professional and amateur. There are chapters giving practical advice for taking visual observations, photographing the clouds with film or with video equipment. A summary of observations from space is included, as well as comments on the connection between noctilucent clouds, seen from the ground, and the polar mesospheric clouds that so far have been measured only from orbit.

This book is beautifully illustrated with photographs, and will help everyone recognize and appreciate these "sailors in the summer night."

Order this manual directly from Dr. Gadsden, 12 Keir Street, PH2 7HJ, Scotland, UK; Telephone/fax: +44 1738 440 358
Please be mindful of the time in Scotland, and call or fax during local daytime only.

Other Publications of Interest to the IAGA Community

Catalogue of Auroae Borealis (502-1735)
edited by Wilfred Schröder, 1996, illustrated.
Contents: Kirch's Auroral Catalogue from unpublished sources; data from 502-1735. ISSN: 0179-05658
Price: 15 DM ($10 US) plus postage

Ertel's Potential Vorticity
edited and collected by Wilfred Schröder and Hans-Jürgen Treder, 1996, illustrated, 150 pages
Contents: Papers by Hans Ertel related to his Potential Vorticity Theorem; Letters and comments on EPV by R. Hide, J. Reed, F. Saunders, D. Lynden-Bell, B. Saint-Guily, H. Picher, C. Truesdell; Reflections on EPV and its application in different countries (USA, France, Russia, China, Austria, etc.). ISSN: 0179-5658
Price: 30 DM ($20 US)

Information contributed by W. Schröder. Orders should be placed with Dr. Schröder at Hecchelstrasse 8, D-28777, Bremen-Roennebeck, GERMANY.

Handbook of Ionospheric Models
edited by R.W. Schunk, 16 chapters and 295 pages.
Contents: In association with the Solar-Terrestrial Energy Program (STEP), a handbook of physic-based ionospheric models. The models cover the D, E, and F-regions at low, middle, and high latitudes. There are global ionospheric models as well as models that describe the self-consistent coupling of the ionosphere to the mesosphere, thermosphere, plasmasphere, and electrodynamics.
Price: FREE

Copies may be obtained from Prof. R.W. Schunk, Center for Atmospheric and Space Sciences, Utah State University, Logan UT 84322-4405 USA; Fax 1 801 797 2992 schunk@cc.usu.edu

International Association of Geomagnetism and Aeronomy Financial Report for the Year 1996

INTERNATIONAL ASSOCIATION OF GEOMAGNETISM AND AERONOMY					
Financial Report of the Year 1996					
Amounts in US Dollars					
RECEIPTS	IUGG	Grants/Contracts	EXPENDITURES	IUGG	Grants/Contracts
15 IUGG Allocation	$ 33,800.00	x	11 Administration	$ 1,881.03	x
2 UNESCO Grants		x	12 Publications	$ 12,944.93	x
3 Other Grants		$ 7,800.00	13 Assemblies	$ 12,716.01	x
4 Contracts/ UNESCO, et	x	x	14 Symposia & Meetings	$ 1,500.00	x
5 Sales of Publications	$ 2,266.60	x	16 Grants (Perm. Serv., etc)	x	$ 4,644.41
6 Miscellaneous	$ 3,289.50	x	17 Contracts with UNESCO	x	$ 7,800.00
			18 Miscellaneous		x
7 Total Receipts	$ 39,356.10	$ 7,800.00	19 Total Expenditure	$ 29,041.97	$ 12,444.41
8 Cash on Hand and in Banks			20 Cash on Hand and in Banks		
1 Jan. 1996	$ 7,607.26	x	31 Dec. 1996	$ 1,242.29	x
9 Investments & Reserves			21 Investments & Reserves		
1 Jan. 1996	$ 51,610.30	$ 5,493.51	31 Dec. 1996	$ 68,289.40	$ 849.10
10 TOTAL	$ 98,573.66	$ 13,293.51	22 TOTAL	$ 69,531.69	$ 849.10
	1 Jan. 1996	31 Dec. 1996			
23 Accounts Receivable	$ -	$ -			
24 Accounts Payable	$ -	$ 616.00			

News from the IAGA Executive Committee Meeting

The IAGA Executive Committee (EC) met 22 and 24 July, 1996, at the Novotel Hotel in Brisbane, Australia, in concert with the AGU Western Pacific Geophysics Meeting. Members attending were C Barton, I Eltayeb, JA Joselyn, D Kerridge, M Kono, M Menvielle, G Rostoker, and O Troshichev. Guest Janet Luhmann, Division IV Chair, attended the 24 July session. The meeting was conducted by M Kono, IAGA President. The following items are excerpted from the draft minutes. The full text of the minutes will be available on request following their acceptance at the Uppsala EC meeting.

The July 1999 General Assembly in Birmingham, England.
K Whaler, of Edinburgh, an IAGA member, accepted appointment as the Chair of the IUGG 1999 Scientific Program Committee. David Kerridge will be the IAGA UK Representative to the Program Committee, working in concert with the Secretary General. The IUGG requested that Associations do not plan symposia that conflict with Union Lectures; they agreed to no more than 5 (and more likely 4) one-hour lectures. The EC agreed that IAGA Symposia will not be scheduled in conflict with IUGG Lectures.

Financial Matters
Existing sources of income for IAGA are the annual IUGG allocation ($33,800 in 1996), awards of grants from IUGG and ICSU, some income from sales of publications, and registration surcharge for IAGA Assemblies. Advertisements were sold for the IAGA Repeat Station guide. IAGA is incorporated as a legal not-for-profit business association in the US with tax-exempt status. The final cost of incorporation, purchasing postal privileges, and transferring the business office of the SG from Scotland to Colorado was $2034.57. The EC nominated Richard Coles (Chair), Luiz M Barreto, and Roland Schlich to serve as the IAGA Finance Committee.

There was some discussion of the new IAVCEI tactic of collecting membership fees from individual scientists. IAGA US tax status allows the possibilitiy of tax-exempt contributions for persons paying US taxes. It was decided that a voluntary contribution to IAGA of $20 to $40 will be solicited. Persons who contribute will be recognized in IAGA News as benefactors of the Association unless they request anonymity.

The guidelines for the Uppsala Assembly registration fee were decided. The EC agreed to a $25 surcharge, split among the 3 associations (IAGA, SCOSTEP, IAMAS) using a check-off system. With regard to travel assistance for the Uppsala Assembly, an application for travel assistance was suggested to centralize the award decisions. A committee including EC members will work with the Division Leaders to assure geographical balance in the awards while taking into account special needs.

IAGA Structure

A proposed revision in Statutes was discussed that would have changed EC membership to include Division Leaders (DL) because they do the work of the Association and should be in charge of its governance. However, arguments opposed included the work load already borne by the DL, and the legality that EC members are elected by Chief Delegates and have legal responsibility for the affairs of IAGA; DL are not formally elected and may not properly represent the body of delegates. DL can be nominated to be EC members. Janet Luhmann, Division IV Leader who participated in the discussion, indicated willingness to continue the present structure but would welcome increased involvement in IAGA administration. It was resolved that there is not strong support for a change in the Statutes; however, there can be increased communication. The EC will henceforth meet with Division Leaders at all Assemblies.

It was noted that all present DLs are native English speakers. Better geographical distribution of DL appointments should be possible because the nomination of the next DL is generally by the incumbent DL and is informal. An associated issue, that of the number of co-leaders, was discussed. More co-leaders improves the opportunity to balance the leadership. The present EC believes that only one co-leader is the most efficient way to do business, but agreed that two co-leaders could be considered on a case-by-case basis. Access to modern communication is a requirement for a DL. Written guidance is needed for new DLs, and such a document is being drafted. Similar concerns were expressed about Working Group Leaders.

Sponsorship and Co-sponsorship of Workshops and Meetings

The EC reviewed procedures for co-sponsoring and supporting meetings. Regional and topic meetings are desirable because of the benefits of in-depth scientific discussions, increased opportunities for student and young scientist participation, and leadership development especially in developing countries. IAGA and General Assemblies are useful to summarize the state of scientific progress

and to hold business meetings that unify and promote global scientific objectives. While appreciating that IAGA Assemblies are our primary responsibility, the EC decided to increase the budgeted amount for co-sponsorships to recognize their importance. To assure equity of support for these meetings, it was decided to formalize the process of awarding IAGA co-sponsorship and financial support, by designing an application form with deadlines twice each year: 1 March and 1 September, for meetings to be held within 12 months of the deadline. Half of the budgeted amount will be awarded after each deadline; the awards will generally be in the range of $1000 +/- $500. If money is needed to plan the meeting, "seed money" could be borrowed and then returned from income from registration fees. The budget for co-sponsoring meetings and workshops for 1997 was set at $4500 (an increase from $3000).

Divers

Concerning IAGA News, the next issue will be printed and mailed. If it is possible to put it on the Web too, people can be asked if they wish to continue to receive the print copy. More generally, the IAGA WWW page received firm endorsement and further development of content and presentation was urged.

Dr. Gadsden's nomination for Honorary Membership received from DJ Williams and seconded by I Gough was unanimously approved.

A proposed joint commission with IAVCEI on Electromagnetic Study of Volcanic Environments was discussed. The eventual recommendation was not to endorse the joint commission at this time, but to encourage joint symposia and workshops. If a broad base of support can be identified, the proposal will be reconsidered.

The EC deliberated at some length about IAGA's future. We must seek ways to earn support, both from governments and from other sources such as the private sector. Ways and means to raise money included writing proposals and seeking publicity for our accomplishments and service to society. Our programs and expenditures must justify solicitation of funds.

Should IAGA expand its scientific agenda to include "biosphere" issues? If so, which Division is best suited to include these topics? Both Divisions II and V have some involvement, and public interest is high. This issue will be added to the Agenda for the joint EC/DL meeting in Uppsala.

REQUEST FOR IAGA CO-SPONSORSHIP OF A MEETING

Biennial IAGA Assemblies are useful to summarize the state of scientific progress and to hold business meetings that unify and promote global scientific objectives. However, smaller regional and topic meetings have benefits that include in-depth scientific discussions, increased opportunities for student and young scientist participation, and leadership development especially in developing countries. While IAGA Assemblies are our primary responsibility, the Executive Committee recently decided to recognize the importance of topical and regional meetings by increasing the budget for co-sponsorships.

To assure that equitable and timely decisions for support are made, the Executive Committee will make use of the following application form, with deadlines twice each year: 1 March and 1 September, for meetings to be held within 12 months of the deadline. Half of the budgeted amount will be awarded after each deadline; the awards will generally be in the range of $1000 ± $500. In addition. if a Local Organizing Committee needs money to plan the meeting, it may apply to borrow "seed money, " to be returned from income from registration fees.

If a meeting sponsor wishes IAGA co-sponsorship but does not require financial assistance or IAGA representation on the organizing committee, the President of IAGA may grant co-sponsorship without action by the Executive Committee. These requests may be made to the President at any time, and do not need to adhere to the deadlines given. However, the information requested below may be useful to the President in making the decision. The names and addresses of all IAGA officers, including the President and Secretary-General, are given in the inside front cover of each issue of IAGA News.

Because the February 1997 issue of IAGA News may not reach some members in time to respond by 1 March, for 1997 the early deadline is extended to 1 April.

APPLICATION FOR IAGA CO-SPONSORSHIP

of Topical and Regional Meetings and Workshops
of Interest to IAGA Members

IAGA is often willing to co-sponsor scientific meetings where the organizers find the IAGA imprimatur helpful. Sometimes, a letter of co-sponsorship allows the organizers to seek support from funding agencies and international organizations were it would not otherwise be possible. The IAGA Secretariat may be able to provide support in ways such as meeting announcements or referrals. In addition, the IAGA Executive Committee has budgeted a small sum of money to be spent annually to support co-sponsored workshops. To equitably distribute these funds, the Executive Committee has established the following procedure.

Please send a letter, fax or or e-mail message containing the following information in this format to the IAGA Secretary General. Application deadlines are **1 March** and **1 September** for meetings to be held within the 12 months following that date. Awards for financial assistance will generally be in the range of $1000 ± $500; two such awards may be given after each deadline. A short report is expected within six months after the meeting, which will be published in IAGA News.

Name of meeting, primary sponsors and other known co-sponsors.
Venue and dates
Scientific focus of and objective of the proposed meeting, and its relationship with IAGA.
Estimated number of participants, abstracts, and sessions.
Level of support requested (in US$) and how the money will be used.

Additional information as appropriate (such as timeliness, the history of meeting if it is one of a series, the expected relative number of national, regional, and international participants, considerations given to the needs of young, disadvantanged, or underrepresented scientists.

Names and addresses of the person submitting the Application, and names and addresses of others on the Local Organizing Committee.

Present Status of On Line Dissemination of Planetary Indices

The International Service of Geomagnetic Indices (ISGI) has designed and written computer software which aims at providing K-derived planetary indices in quasi real-time. Provisional indices are determined daily by using the digital minute values of the geomagnetic field provided directly by the observatories, or through INTERMAGNET GIN's; they are circulated through the automatic e-mail service named IMAGINE described below.

We presently compute aa and am, together with the equivalent codes Kpa and Kpm given in the Kp scale, so that they can be directly used in models needing Kp. Indices are derived with the data available at the day D+2, and are regularly upgraded as soon as missing data become available.

IMAGINE means :
Interface for Mailing Automatically Geomagnetic INdices via Electronic networks

DESCRIPTION :
This mail interface to the Publications Office of the International Service of Geomagnetic Indices (ISGI) allows users on remote computers to obtain geomagnetic indices from the ISGI database. The service runs on a computer at the ISGI hosting laboratory (CETP, Saint Maur, F-94107 FRANCE). Its internet address is :

ISGI.DATA@cetp.ipsl.fr

Upon receiving messages, the IMAGINE service consults the <subject> field to determine what operation is required. The operation is performed and the results are sent back to the caller. The following phrases may be used in the <subject> field :

SEND INFORMATION	- to obtain these instructions
SEND INDICES	- to obtain documentation about the indices available at the service
SEND FORMATS	- to obtain description of the formats used in transmitted data
SEND NEWS	- to obtain the latest updated information
SEND AA-IND (*)	- to obtain aa indices (and Kpa) for a maximum of 31 consecutive days
SEND AM-IND (*)	- to obtain am indices (and Kpm) for a maximum of 31 consecutive days

* - These items require the body of the mail message to specify what data is required. The format of the message is described next.

MESSAGE BODY:
The message body takes the following format :

YYYYMMDD LL	YYYY (year), MM (month), DD (day) is the starting date LL (two digits) is the number of days required (maximum 31)

Example :
to request aa (Kpa) for 6 days commencing on 8 October, 1994

subject:	SEND AA-IND
message body:	19941008 06

UPDATE
Information about the most recent data available is given in NEWS. Data on line in MARCH 1997 are

– the definitive values of aa (Kpa) for 1993, 1994 and 1995, and provisional values of aa (Kpa) from January 1, 1996 until day D-2;

– the definitive values of am (Kpm) for the years 1959 until 1992, and provisional values from January 1, 1993 to day D-2;

The date of computation of the indices is six weeks after the end of the month for data from January 1, 1993 to December 31, 1996, and two days after the end of the month for data from January 1, 1997, onwards.

ACKNOWLEDGMENTS : The IMAGINE service has been established on the model of the automatic e-mail running at INTERMAGNET GIN Edinburgh thanks to the kind cooperation of Simon Flower. The computation of the K indices of the observatories belonging to the aa and am networks is made using the FMI algorithm [see IAGA News, No. 32, December 1993, page 27]. Special thanks are due to the observers and to the cooperation of the persons in charge of the INTERMAGNET program.

For specific comments or questions, the service can be reached directly by sending a message to :ISGI.PUBOFF@cetp.ipsl.fr

A. Berthelier
ISGI, CETP
Saint Maur, FRANCE

URSI/IAGA Joint Working Group on VERSIM:

VLF/ELF Remote Sensing of the Ionosphere and Magnetosphere
VERSIM activities 1993-96

The working group serves as a forum for researchers studying the behaviour of the magnetosphere and ionosphere by means of ELF and VLF radio waves, both naturally and artificially generated. Originally the emphasis was on probing of the magnetosphere by whistlers, but recently the scope has become somewhat broader. The group aims to promote research in this field by facilitating the exchange of ideas, information and experience between active research workers and other interested scientists. This is done through regular meetings at URSI and IAGA Assemblies, and via the circulation of a newsletter. The group has also been active in sponsoring scientific symposia at IAGA and URSI Assemblies, in areas relevant to its field of interest, and in coordinating observational campaigns. At present the main areas of interest are Plasma structures and boundaries - morphology and dynamics, wave-particle and wave-wave interactions, wave-induced precipitation, and propagation in magnetosphere and ionosphere.

Meetings of the VERSIM group at Kyoto and at the 1993 IAGA Assembly in Buenos Aires recommended that the working group continue in existence.

The Kyoto meeting elected U.S. Inan (USA) to serve another 3-year term as URSI co-chairman of the working group, and proposed a session on Whistler-mode waves and their effects on the radiation belts (convenors, A.J. Smith, U.S. Inan and J. Lemaire) for the 1996 URSI Assembly in Lille, France. This was later approved by URSI Commission H and the URSI executive and the session took place on 29 August. The programme for the session was published in VERSIM Newsletter No. 9.

A successful session was held at the Kyoto URSI General Assembly on Whistlers and Particle Precipitation. A report on this session was published in VERSIM Newsletter, No. 6.

The Buenos Aires meeting proposed a half-day session for the 1995 IAGA/IUGG Assembly in Boulder, on Whistler-mode waves and Particle Precipitation (convenors A.J. Smith and U.S. Inan). This was approved by IAGA Division 3 and the IAGA executive and was held on 8 July 1995 (see below). The session was been well-supported with 24 papers submitted, although some were later

withdrawn because the authors (mainly from Russia) failed to obtain travel funds. One contributor, from Belgrade, withdrew her paper when she was denied a US entry visa. A report of the session was published in VERSIM Newsletter No. 8.

A meeting of the VERSIM working group was held at Boulder, also on 8 July 1995. A report of this meeting was published in VERSIM Newsletter No. 8. A proposal from D. Nunn (UK) for a session at the 1997 Uppsala IAGA General Assembly on Localised ionospheric perturbations related to lightning and VLF transmitters was approved. This was later endorsed by IAGA Division 2 and the IAGA executive, and the session is scheduled for the morning of 11 August 1997 (convenors D. Nunn and A.J. Smith). The meeting recommended that the working group remain in existence until at least 1999, and A.J. Smith was elected to serve as IAGA co-chairman for a further 4-year term.

A VERSIM business meeting was held at Lille. See VERSIM Newsletter No. 9 for details.

There are currently 115 scientists from 24 different countries (Australia, Austria, Belgium, Brazil, Canada, China, Czech Republic, Denmark, Finland, France, Germany, Hungary, India, Japan, New Zealand, Norway, Russia, South Africa, Sweden, Turkey, Ukraine, UK, USA, and Yugoslavia) on the VERSIM mailing list.

Four newsletters (Nos. 6-9) have been issued since the 1993 URSI Assembly in Kyoto, Japan.

The working group now has a regularly updated World-Wide-Web page at: http://www.nerc-bas.ac.uk/public/uasd/versim.html.

A.J. Smith (IAGA Co-chairman of the VERSIM JWG), 20 August 1996

Istanbul-Kandilli - 50 Years

There has been an observatory at Kandilli since 1911, when the Istanbul astronomical and meteorological observatory moved there from the center of the city. The first magnetic measurement at Kandilli was made by the Director, Fatin Gökmen, on March 12, 1927, using a Chasselon-Brunner magnetic theodolite and a dip circle brought from France in 1926. Further measurements were made by Osman Sipahioğlu between 1936 and 1947, but it was not until 1947 that systematic magnetic measurements were started. At a time when most of Europe was still suffering shortages and economies as a consequence of the second world war, the Turkish government found funds to establish a well-equipped magnetic observatory in fine new buildings. Sipahioglu was its first Superintendent. Results were presented at the Oslo IUGG meeting in 1948 and the President (J.A. Fleming) subsequently wrote to say "It has been a pleasure to have such excellent works from a region where systematic observations are so much needed." Praise and encouragement were also given by Julius Bartels.

The Kandilli site is in wooded hills on the Asian shore of the Bosphorus, with magnificent views both of the Bosphorus and of the old city of İstanbul, about 15km distant. Many buildings related to a wide variety of geophysical and astronomical disciplines share the 36 hectare site, which since 1985 has been a postgraduate campus of Boğaziçi (Turkish for Bosphorus) University. The three main magnetic structures are a variometer building, absolute pavilion and magnetic offices.

The copper-roofed variometer building is 14m by 10m, plus lobby and staircase. The walls are of local stone and extend from 2m above ground to 5m below, increasing in thickness from 0.5 m to 2m from top to bottom - a very solid structure! Inside are two wooden rooms entirely below ground level. Each measures 4.5 m wide by 7m long by 3m high. They are separated by 1.5 m, surrounded by a 1m corridor and have 2m of space above and below. One room houses Askania, Eschenhagen system, photographic recorders and the other, until recently, housed a stand-by set of La Cours. The offices are in a two-story, recently renovated, Ottoman-style building 50m clear of the observing site. They include a palæomagnetic laboratory and workshop.

Eleven meters north is the absolute pavilion, which is wooden, with a copper roof. It is 10m by 12m, with a 4m high ceiling. The absolute instruments have changed over the years, but still include a working Askania earth-inductor, BMZ 63 and QHMs 169 and 171, as well as the currently-used Elsec PVM for *H* and *Z* and the original Askania (Schmidt large size) declinometer for *D*, using the dome of a distant mosque as the azimuth mark.

In 1947 the population of İstanbul was about one million and Kandilli was out in the country. But the population is now about 12 million and rising, so the city has engulfed Kandilli. Fortunately, it is on a large, protected site, and the many residential houses and apartment blocks that come right up to the boundaries do not yet appear to have had a significant effect on the magnetic records. There are contingency plans to move to a new site near İznik (formerly Nicea), about 100km to the south east, if interference becomes serious. This is a site of great geophysical interest because it lies on the very-active North Anatolian fault in a seismic gap, so a major earthquake could occur there at any time. The institute already maintains many field sites there, including 7 for the continuous monitoring of total magnetic field and 24 total-field repeat stations.

With a view to joining Intermagnet in our 50th year, we have recently replaced the La Cour variometers with two three-component EDA fluxgates (they may later be transferred to İznik one at a time, to give an overlap) controlled by BGS "Flare" data loggers. These instruments are currently undergoing stability tests and their data are being compared with those from the Eschenhagen photographic records. Also to mark the 50th anniversary, the İstanbul-Kandilli magnetic hourly values will be deposited with the World Data Centres in computer-readable form. They cover the interval 1949-1996, because the first two years were unreliable, and they include a gap from 1965 to 1969, for which interval the data are not yet prepared. After a gap since 1980, annual volumes are now being published, starting with that for 1992.

The İstanbul-Kandilli magnetic observatory is proud of its past 50 years of operation and looks forward to a yet more active future.

S.R.C. Malin and A. Mete Işikara
Boğaziçi University, Kandilli Obsevatory and Earthquake Research Institute, Çengelköy 81220, İstanbul, Turkey.

Report on the VIIth IAGA Workshop on Geomagnetic Observatory Instruments, Data Acquisition and Processing

hosted by the GeoForschungsZentrum, Potsdam, Germany.

The workshop took place from 9-14 September 1996. Practical and poster sessions were held at the Adolf Schmidt Observatory for Geomagnetism, Niemegk, and lecture sessions were held in Wittenberg. The workshop was attended by 95 participants from 33 countries. The wide international participation in the meeting was made possible through the generous financial support provided by the GeoForschungsZentrum, Potsdam and the German Research Foundation (Deutsche Forschungsgemeinschaft).

Four magnetometers were installed at Niemegk Observatory for pre-workshop tests and comparisons, and were operated for more than 6 weeks under controlled environmental conditions. On two occasions during this period the temperature in the instrument room was increased to 35 degrees C for about 70 hours to test the thermal behaviour of the instruments. During the practical sessions, held over the first three days, 21 participants made a total of 45 absolute measurements of declination and inclination using fluxgate-theodolites which they had brought to the workshop from their own observatories. In addition, 14 sets of absolute measurements of total field intensity were made using proton magnetometers. Preliminary results, comparing the observations with those made using the Niemegk Observatory standard instruments, were given to the observers during the workshop. A USA/Hungarian #delta-D/delta-I# proton vector magnetometer with compact coils was also operated during the practical sessions for comparison with both absolute and variometer records, and two observers made use of the observatory facilities to determine the frequency response of their instruments. Over the first three days 10 posters were presented and there were exhibits of magnetometers, the INTERMAGNET programme, and the Niemegk Observatory database system.

The lecture sessions were held over the following three days. A total of 48 oral papers were presented and there was an open session on INTERMAGNET. It is intended to publish proceedings of the workshop including all the papers presented (both oral and poster), the final results of the absolute measurements, and the results of the pre-workshop instrument tests.

Dr Adolf Best and Dr Hans-Joachim Linthe

A QUEST FOR OLD ISSUES OF GEOSCIENCES JOURNALS AND BOOKS

Dear Colleagues!
We would like to turn to you with somewhat unusual request. We know that some institutions have several copies of older issues of the journals they receive. Sometimes libraries even get rid of those "doubles" for the sake of place. But this literature could be of much importance and use for others.

During the times of the Soviet Union such editions as JGR, GRL, Planetary and Space Sciences, J. of Atmospheric and Terrestrial Physics, J. of Plasma Physics, Phys. Fluids etc. were not received in Ukraine much. For example, we do not have access to the J. of Atm. and Terr. Phys., other journals are very limited in regularity and access is quite difficult. JGR and GRL are available only for selected months, with multiple gaps.

Everybody working in science knows how important to have the references handy. We here at Kiev Shevchenko University have a team which works actively in the fields of space physics, plasma physics and satellite data analysis. We are involved in the Interball mission, APEX, carried out optical observations of CRRES experiments and work on other problems. We are one of the leading institutions in the future Ukrainian "Warning" project to study the lithosphere-atmosphere-ionosphere relations. Our less recent works were related to active experiments in space, solar corona theory and observations, auroral studies etc. Talented students and post-graduates study and work at the Department. Level of scientists who studied at the Department is very high, e.g., Prof. E. Ponomarev at SibIZMIR Russia, Drs. Yu. Taranenko and V. Pas'ko at Stanford, Acad. N. Steshenko, director of Krimean AO, and many others.

We would be most grateful to any contributions to our library at the Department: older issues of space science journals, monographs, preprints etc. Names of the contributing institutions will be mentioned in acknowledgements in any publication where the materials gifted are used.

Looking forward to your help,
Sincerely, Dr. Vasyl Ivchenko
Chief of the Department of Astronomy and Space Physics,
Physics Faculty, Kiev Shevchenko University
Kiev, Ukraine
ivchenko@astrophys.ups.kiev.ua

A Note on the Article "Terrestrial Magnetism" by Balfour Stewart

A well-known article written by Balfour Stewart (which is thought to be the first paper that suggested an atmospheric dynamo responsible for the geomagnetic Sq variation) is shown on page 938 of the monumental textbook GEOMAGNETISM by S. Chapman and J. Bartels, published form the Oxford University Press (Oxford at the Clarendon Press) in 1940 (reprinted later in 1951 and again in 1962), as "BALFOUR STEWART, 'Terrestrial magnetism', Enc. Brit., 9th ed. 1882, 36pp." Since then almost all research workers in geomagnetism referred to this article as Stewart (1882). However, the correct reference is

BALFOUR STEWART, 'Terrestrial Magnetism', Encyclopedia Britannica, 9th ed., Vol. 16, pp.159-184 (1883).

There was unfortunately a minor misprint in Chapman-Bartels' book; "1882, 36pp." should have been printed as "1883, 26pp."

It is very interesting to note that this article by Stewart appeared as a subject under METEOROLOGY, with the following contents:

1 Introduction (§1),
2-31 Instruments for determining the magnetic state of the earth (§§2-25),
32-41 Magnetic pole of the earth - Secular variation (§§26-35),
42-89 Inequalities in or connected with terrestrial magnetism depending on the sun (§§36-82),
90-108 Various phenomena connected with the sun and with terrestrial magnetism (§§83-101),
109-121 The effect of solar variability on the meteorology of the earth (§§102-114),
122-151 Hypothetical views regarding the connection between the state of the sun and terrestrial magnetism (§§115-144).

In Chapman-Bartels' textbook, "Stewart's dynamo theory" is outlined in the section numbered 23.3 on pages 751-752, with occasional citation from Stewart's original sentences with § numbers in the Encyclopedia Britannica. Stewart wrote as follows. "We are thus driven by the method of exhaustions to look to the upper regions of the earth's atmosphere as the most probable seat of the solar influence in producing diurnal magnetic changes, and it need hardly be said that the only conceivable magnetic cause capable of operating in such regions must be an electric current. Now we know from our study of the aurora that there are such currents in these regions - continuous near the pole and occasional in lower latitudes." It is really a great mystery, however, why the § numbers written in Chapman-Bartels' book are always greater by 7 than those in Stewart's original article in the Encyclopedia Britannica.

Stewart (1883) article is really worth admiring for its comprehensive description of all the knowledge at that time on the geomagnetic field and its spatial and temporal variations. I am recently very much impressed again that his paper included (§§40-44 on pp. 168-169) even the seasonal dependence of the daily variation in the magnetic declination, D, at middle and low latitudes, to which we nowadays have to pay attention because of its possible indication for interhemispheric field-aligned currents flowing in the dayside magnetosphere.

N. Fukushima
Professor Emeritus, University of Tokyo, Tokyo 113, Japan

1997 International Geophysical Calendar

(The following is abridged for IAGA News from the information provided.)

This Calendar continues the series begun for the IGY years 1957-58, and is issued annually to recommend dates for solar and geophysical observations which cannot be carried out continuously. Thus, the amount of observational data in existence tends to be larger on Calendar days. The recommendations on data reduction and especially the flow of data to World Data Centers (WDCs) in many instances emphasize Calendar days. This 1997 Calendar has been drawn up by H.E. Coffey, of the International Space Environment Service (ISES) Steering Committee, and is published for the International Council of Scientific Unions and with financial assistance of UNESCO. The International Space Environment Service (ISES) is a permanent scientific service of the International Union of Radio Science (URSI), with the participation of the International Astronomical Union and the International Union Geodesy and Geophysics. ISES adheres to the Federation of Astronomical and Geophysical Data Analysis Services (FAGS) of the International Council of Scientific Unions (ICSU). The ISES coordinates the international aspects of the world days program and rapid data interchange.

The calendar is available on-line at

http://www.sec.noaa.gov/ises/ises.html

Copies are available upon request from ISES Secretary for World Days, Miss H.E. Coffey, WDC-A for Solar-Terrestrial Physics, NOAA, E/GC2, 325 Broadway, Boulder, Colorado 80303, USA, FAX (303)497-6513, e-mail hcoffey@ngdc.noaa.gov.

Definitions:

Time = Universal Time (UT);
Regular Geophysical Days (RGD) = each Wednesday;
Regular World Days (RWD) = Tuesday, Wednesday and Thursday near the middle of the month (see calendar);
Priority Regular World Days (PRWD) = the Wednesday RWD;
Quarterly World Days (QWD) = PRWD in the WGI;
World Geophysical Intervals (WGI) = 14 consecutive days each season (see calendar);
ALERTS = occurrence of unusual solar or geophysical conditions, broadcast once daily soon after 0400 UT;
STRATWARM = stratospheric warmings
Retrospective World Intervals (RWI) = intervals selected by MONSEE for study.

Solar Eclipses :

(Description by Dr. Jay Pasachoff, Williams College, jmp@williams.edu with input from Fred Espenak, NASA GSFC. http://umbra.gsfc.nasa.gov/eclipse/predictions/eclipse-paths.html)

a.) 8-9 March 1997 (total) eclipse with totality visible only in Mongolia north of Ulaan Baator and in eastern Russia. Totality up to 2 min 50 s, though Sun never appears higher than 23 degrees above horizon. Totality in Mongolia is 2 min 25 s with Sun 13 degrees above horizon, then touches Chinese border before continuing into Russia. Partial phases visible through-out Eastern Asia except extreme south, in North Pacific Ocean including Japan, in Arctic regions, Alaska, and Western Canada. Track begins N49 E87, ends N83 W158.

b.) 2 September 1997 (partial) eclipse visible in Australia, New Zealand, western Antarctica, and the ocean between them. Maximum magnitude is 90% of the solar diameter covered.

Days with significant meteor shower activity

(selected by R. Hawkes, Mount Allison Univ, Canada, rhawkes@mta.ca). Includes important visual showers and also unusual showers observable mainly by radio and radar techniques.

Northern Hemisphere: 3-5 Jan; 21-23 Apr; 3-6 May; 6-11, 27-29 Jun; 11-14 Aug; 21-23 Oct; 16-19 Nov; 13-15, 22-24 Dec 1997; 3-5 Jan 1998.

Southern Hemisphere: 3-6 May; 6-11, 27-29 Jun; 27 Jul-2 Aug; 21-23 Oct; 16-19 Nov; 13-15 Dec 1997.

The International Leonid Watch focuses on the Leonid shower which shows enhanced rates in 1997 and possible meteor storms in 1998 and 1999; 1997 maximum is expected 1100 UT 17 Nov.

+ Incoherent Scatter Coordinated Observations Days

starting at 1600 UT on the first day of the intervals indicated, and ending at 1600 UT on the last day of the intervals:

6-10 Jan 1997 MLTCS/CADITS; 11-12 Mar SUNDIAL;

8-10 (7-11, 14-18, 28-2) Apr WLS ("floating" campaign tied to recurrent solar activity. One period will be selected in month prior to this campaign. Instruments which must finalize schedules earlier should plan to operate on 8-10 Apr);

3-6 Jun POLITE; 23-27 Jun MLTCS/CADITS;

2-3 Sep DATABASE; 21-23 Oct WLS;

4-5 Nov DATABASE; and 2-4 Dec POLITE

where CADITS = Coupling and Dynamics of the Ionosphere-Thermosphere System (Contacts are C. Fesen -

fesen@tides.dartmouth.edu; R. Johnson --
rjohnson@dexter.sprl.umich.edu);
DATABASE = Incoherent Scatter Database
(A. van Eyken -- tony@eiscat.no);
MLTCS = Mesosphere, Lower-Thermosphere Coupling Study
(Same contacts as CADITS);
POLITE = Plasmaspheric Observations of Light Ions in the Topside Exosphere (P. Erickson -- pje@hyperion.haystack.edu);
SUNDIAL = Coordinated study of the ionosphere/magnetosphere
(E. Szuszczewicz -- szusz@mclapo.saic.com);
WLS = Wide-Latitude Substorm Dynamics
(J. Foster -- jcf@hyperion.haystack.edu).

There are priority recommended programs for measurements not made continuously (in addition to unusual ALERT periods) for the following pehnomena. Details are available on the Official Calendar.

Aurora and Airglow
Atmospheric Electricity
Geomagnetic Phenomena
Ionospheric Phenomena
Incoherent Scatter
Ionospheric Drifts
Traveling Ionosphere Disturbances
Ionospheric Absorption
Backscatter and Forward Scatter
Mesospheric D region electron densities.
ELF Noise Measurements of earth-ionosphere cavity resonances --
Meteorology
GAW (Global Atmosphere Watch)
Solar Phenomena
Space Research, Interplanetary Phenomena, Cosmic Rays, Aeronomy.

International Geophysical Calendar 1997 (Final)

	S	M	T	W	T	F	S
JANUARY				1	2	3	4
	5	6+	7+	8+	9+	10+	11
	12	13	14*	15*	16	17	18
	19	20	(21)	(22)	(23)	24	25
	26	27	28	29	30	31	1
FEBRUARY	2	3	4	5	6	7	8
	9	10	11*	12*	13	14	15
	16	17	(18)	[19]	(20)	21	22
	23	24	25	26	27	28	1
MARCH	2	3	4	5	6	7	[8]
	[9]	10	11‡	12‡	13	14	15
	16	17	(18)	(19)	(20)	21	22
	23	24	25	26	27	28	29
APRIL	30	31	1	2	3	4	5
	6	7	8‡	9‡	10+	11	12
	13	14	(15)	(16)	(17)	18	19
	20	21	22	23	24	25	26
	27	28	29	30	1	2	3
MAY	4	5	6	7	8	9	10
	11	12	(13)*	[14]*	(15)	16	17
	18	19	20	21	22	23	24
	25	26	27	28	29	30	31
JUNE	1	2	3+	4‡	5‡	6+	7
	8	9	(10)	(11)	(12)	13	14
	15	16	17	18	19	20	21
	22	23+	24+	25+	26+	27+	28
	29	30					
	S	M	T	W	T	F	S

	S	M	T	W	T	F	S
			1	2	3	4	5
JULY	6	7	(8)*	(9)*	(10)	11	12
	13	14	15	16	17	18	19
	20	21	22	23	24	25	26
	27	28	29	30	31	1	2
AUGUST	3	4	5*	6*	7	8	9
	10	11	(12)	[13]	(14)	15	16
	17	18	19	20	21	22	23
	24	25	26	27	28	29	30
SEPTEMBER	31	1	[2]‡	3‡	4	5	6
	7	8	(9)	(10)	(11)	12	13
	14	15	16	17	18	19	20
	21	22	23	24	25	26	27
OCTOBER	28	29	30	1	2	3	4
	5	6	(7)*	(8)*	(9)	10	11
	12	13	14	15	16	17	18
	19	20	21+	22+	23+	24	25
NOVEMBER	26	27	28	29	30	31	1
	2	3	4‡	5‡	6	7	8
	9	10	(11)	[12]	(13)	14	15
	16	17	18	19	20	21	22
	23	24	25	26	27	28	29
DECEMBER	30	1	2‡	3‡	4+	5	6
	7	8	9	10	11	12	13
	14	15	(16)	(17)	(18)	19	20
	21	22	23	24	25	26	27
1998	28	29	30*	31*	1	2	3
JANUARY	4	5	6	7	8	9	10
	11	12	(13)	[14]	(15)	16	17
	18	19	20	21	22	23	24
	25	26	27*	28*	29	30	31
	S	M	T	W	T	F	S

(21) Regular World Day (RWD)

(22) Priority Regular World Day (PRWD)

[19] Quarterly World Day (QWD) also a PRWD and RWD

[1] Regular Geophysical Day (RGD)

[10 11] World Geophysical Interval (WGI)

6+ Incoherent Scatter Coordinated Observation Day

[8] Day of Solar Eclipse

[9 10] Airglow and Aurora Period

14* Dark Moon Geophysical Day (DMGD)

SECOND WORKSHOP: SOLAR ACTIVITY EFFECTS ON THE MIDDLE ATMOSPHERE

Sponsored by: IAGA and ICMA/IAMAS

Date: 18-22 August 1997
(just after IAGA/ICMA/SCOSTEP Assembly)
Place: Faculty of Mathematics and Physics, Charles University, Prague, Czech Republic

Program Committee: J. Lastovicka (IAGA, Prague, chairman), S. Chandra (IAGA, NASA/GSFC), and L.L. Hood (ICMA/IAMAS, Tucson)
Local organizers: Institute of Atmospheric Physics, Academy of Sciences of the Czech Republic; Faculty of Mathematics and Physics, Charles University; Czech Meteorological Society

The Workshop will cover the effects of solar electromagnetic radiation (solar cycle, solar rotation, and other time scales), solar wind (including geomagnetic storms), and high energy particles on the middle atmosphere and to some extent on the troposphere and the lower ionosphere. Problems of distinguishing between long-term solar and anthropogenic effects and other long-term changes (e.g. volcanic) will be included. Related invited papers about solar radiation, particles, geomagnetic storms and external long-term changes are foreseen.

Confirmed invited speakers (in some cases depending on travel money and institution approval); other invited speakers are in process of negotiation:
K. Labitzke, I. Charvatova, J. Bochnicek/V. Bucha, P. Collis, J.L. Lean, C.H. Jackman, S. Chandra, R.A. Goldberg, A.D. Danilov, L.B. Callis, B.A. Tinsley.

The intent of the organizers is that the Prague Workshop will be complementary to the Uppsala IAGA/ICMA/SCOSTEP'97 program.

The first Workshop was held in the Castle of Liblice near Prague in the spring of 1989 with Proceedings published in the Handbook for MAP, Vol. 29 (1989).

The deadline for submission of abstracts is 1 June 1997.

Registration fee (including conference materials, social events, refreshments, etc.):

140 USD before 1 March 1997
150 USD before 1 June 1997
170 USD after 1 June 1997

It is preferred that payment be made to bank account:
Komercni banka, pobocka Praha 4 (= branch Prague 4), Prague, Czech Republic, bank account: 6311880217/0100

Social events: official evening party; excursion in old Prague; possibly a concert.

A program for accompanying persons will be organized if there is an interest on the part of more than 15 persons. If no program is organized, we will advise accompanying persons on how and where to find tourist agencies or on where to go in Prague and its vicinity.

Accommodation will be available in student residences (4 min walking distance to Workshop area) and in Prague hotels. The price of accommodation in student residences (used in summer as a tourist hotel) is 70 USD per night for a double room (including full board - 3 meals per day) and 45 USD for a single person in a double room (the price may be subjected to a small change only). Accommodation in guesthouses or hotels in Prague (with necessity to travel a couple of minutes by public transport to meeting area) may be arranged on request at prices between 50 to several hundred USD per night. Lunches will be available in the student mensa in the area of student residences.

"Golden" Prague is one of the most interesting historical towns in Europe. Its well-preserved part, including the Castle and many medieval churches, is a historical reservation of UNESCO. Prague offers a rich cultural life. In the vicinity of Prague, there are other interesting historical castles, monasteries etc.

Prague airport has direct and/or indirect connections to the whole world. Prague may be reached also by train or by car (within a day from Paris, Den Haag, Hamburg, Milano etc.). We will try to assist you at the airport/railway station and to arrange transport on request.

For more details contact Dr. Jan Lastovicka (jla@ufa.cas.cz).

IGAC/SPARC Conference on Global Measurement Systems for Atmospheric Composition

Toronto Ontario, CANADA
May 20-22, 1997

The aim of this conference is to bring together managers, scientists and policy makers to discuss current knowledge of and predictive capabilities for atmospheric composition, to define the near-term requirements for global measurement systems, and to begin developing a framework for more comprehensive systems in the future.

For more information, contact
IGAC-GOMAC (J.R. Drummond)
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http://www.atmosp.physics.utoronto.ca

XXII IUGG General Assembly

Birmingham, United Kingdom
July 19-30, 1999

IAGA Program Committee Contact: Dr. David Kerridge, BGS, Murchison House, West Mains Road, Edinburgh, EH9 3LA, UK, d.kerridge@bgs.ac.uk

While most of the details concerning the 1999 General Assembly are yet to be arranged, the place and dates of the scientific sessions are known, as shown above.

The IAGA Secretariat has been notified of a change of address for the following colleagues:

M Gadsden, now retired in Perth, Scotland
David McA McKirdy, now in St. Andrews, Scotland
JJ Olivero, now in Daytona Beach, Florida, USA
Nils Olsen, now in Copenhagen, Denmark
Xiaoqing Pi, now in Pasadena, California, USA
Gerhard Schwarz, now in Uppsala, Sweden
Y Tanaka, now in Yamaguchi, Japan
J Taubenheim, now retired in Berlin, Germany
Torquil Smith, now in Berkeley, California, USA

Regretfully, the IAGA Secretariat has been notified of the recent death of the following colleagues. Memorial notices are included in this issue for those shown in bold print. A memorial article for M Nicolet will be included in the next IAGA News.

F Arnold
L G Botti
R L Chasson
W Hanson
V Laursen
M Nicolet
H Ranta
M Rossberg
J Vickrey

William B. Hanson

1923-1994

Dr. William B. Hanson died 11 September 1994 at age 70 as the result of massive spinal-cord injuries suffered in a frustratingly improbable bicycle accident. At the time of his death, he was Professor and Director of the Center for Space Studies of the University of Texas at Dallas, and he was actively pursuing his research in the physics of planetary ionospheres.

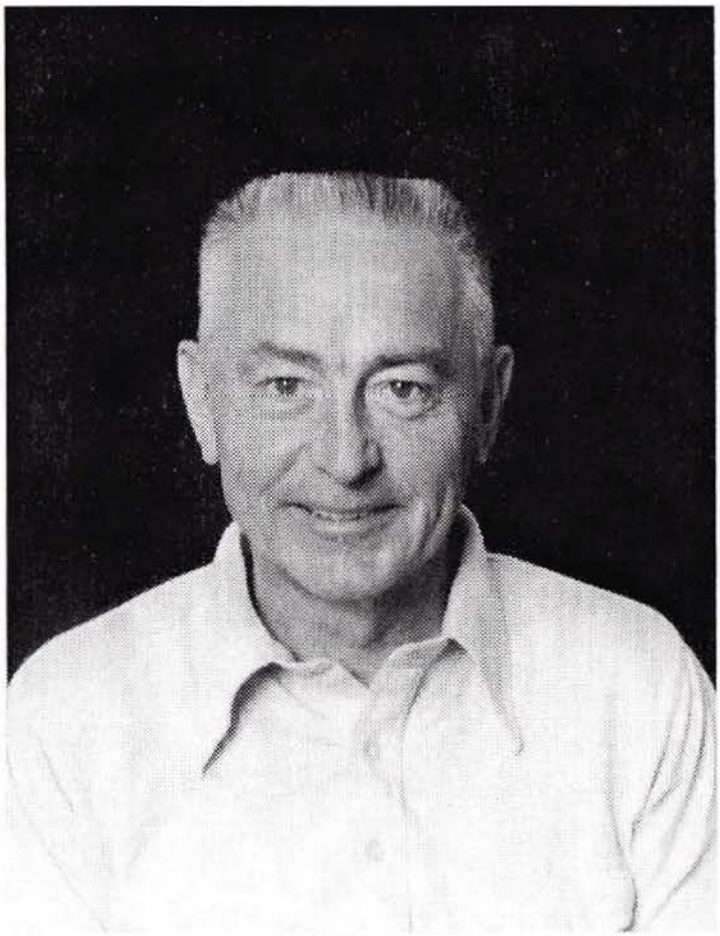
Bill Hanson received his Ph.D. in low-temperature physics from George Washington University in 1954. Although he started in low-temperature physics, he made an early and dramatic change in field of research. In a masterpiece of good timing, in 1956, a year before the launch of Sputnik, he joined the Lockheed Missiles and Space Co., where he started his research in space physics.

Early in his career, Bill expressed the desire to understand aeronomy and ionospheric physics so well that it became something he could feel inside himself – intuition at its pinnacle. He succeeded. It showed in his work, and it was a joy to hear him explain something. His insights seemed deceptively simple because they were so basic. His love of research caused him to develop a taste for good science accompanied by a distaste for bad science. One would hear him say something like, "I have a bad feeling in my stomach about that," or, "That can't be right because...," followed by a brief, logical presentation of theoretical and/or experimental evidence arrayed to demolish the offending idea.

Hanson's research covered both experiment and theory. Here are just two examples. At the dawn of the space age, he derived basic properties of ionospheric structure. In theoretical aeronomy, his solution of the problem of how the nighttime ionosphere is maintained is so fundamental that it is still used to infer the concentration of atomic hydrogen from measurements of other constituents. In experimental aeronomy, he designed and built the instrument that made the first in-situ measurements of the ionosphere of another planet when the Viking spacecraft landed on Mars. His list of accomplishments in theory and experiment is laudable both in its diversity and in its contributions to fundamental understand of planetary aeronomy.

Bill Hanson exhibited outstanding traits that went beyond those we usually see in a dedicated, productive scientist. He was a leader ad a role model. He was responsible for building up the strong group at the University of Texas at Dallas. He was soft-spoken in personal interactions, but it was fun well as instructional to hear his critical analysis of the latest scientific happenings. At meetings, many of us depended on him to tell us what was really significant within the flood of scientific presentations. We counted on him to critique our preliminary ideas, which he was always willing to do with skill and candor. And, of course, we always looked forward to hearing or reading his latest scientific work. Those of us who interacted with him feel a void in his passing, and those who did not have missed knowing, learning from, and being influenced by a wonderful human being.

Alex J. Dessler



Bill Hanson

Viggo Laursen (1904-1995)

Viggo Laursen was the son of a farmer in Jutland. He attended gymnasium in Viborg, and graduated from the University of Copenhagen in 1929. He spent a year as an assistant at the geomagnetic observatory at Godhaven in Greenland in 1928; this was the beginning of a long career at the Danish Meteorological Institute (DMI). He established and ran the geophysical station at Thule during the Second Polar Year (1932-1933), obtaining excellent results under extremely primitive conditions. In 1946-47 he was again at Thule where he established a geomagnetic observatory at the Danish-American weather station. The site later changed into Thule Air Base which made magnetic recordings impossible. In 1955 he organized the removal of the observatory to the new village Qaanaq.

During the 1930's VL and Johannes Olsen formed a team with Dan la Cour, until the death of la Cour in 1942. They developed the famous geomagnetic la Cour instruments: QHM, BMZ, variometers and recorders. Some of these instruments were already in use during the Second Polar Year, but the great market expansion came after the Second World War. VL was head of the department at the DMI which exported la Cour instruments to nearly every country in the world.

VL had a long career in IAGA. He was liquidation officer of the Second Polar Year, Secretary-General of IAGA in 1951-1957, President in 1957-1960, and Honorary Member from 1975. He was also honorary member of the Danish Geophysical Union. He was a member of the International Geophysical Year Committee, chairman of the World Magnetic Survey Board 1963-1969, and he took part in the UNESCO mission to Africa in 1963. He made a great effort to encourage international comparison of geomagnetic standards, and IAGA's Service of Comparisons was consequently placed at DMI. In 1961 VL was a visiting lecturer at the University of Ghana. He and Johannes Olsen wrote the article "Classical Methods of Geomagnetic Observations" for the Handbuch der Physik.

VL was a gifted person. He mastered several languages, and was an expert in writing a lucid text. He was witty, full of anecdotes, and a glorious toast master. He was a reliable boss, but rather conservative. He never married, and he kept his home life private. In 1974 he retired from DMI but in the years to come he still made a daily bicycle trip to his old working place at Charlottenlund. One day he was run over by a car, and had a month in hospital. He never regained full use of his limbs, and his last few years were rather sad.

Emil Kring Lauridsen

Hilkka Ranta

Dr. Hilkka Ranta passed away at the age of 55 on December 16, 1996, as a result of sudden and totally unexpected illness. Hilkka started to work in Sodankylä as a scientist in the Geophysical Observatory of the Finnish Academy of Science and Letters in 1971. Before that time she had worked in the University of Oulu in the department of chemistry and she had also been a teacher in high school in mathematics, physics and chemistry. After starting her work in the observatory she concentrated in ionospheric and magnetospheric research, earning her doctorate in 1979. She studied high energy particle precipitation at high latitudes often using riometer observations. Hilkka was also familiar with incoherent scatter techniques and used the data measured by EISCAT radars. In cooperation with her colleagues from various institutes in several countries she established an extensive organized network of riometer stations in the Scandinavian longitude sector and took care of the data analysis and other practical things. She was responsible in Finland for the IRIS (imaging riometer) project in cooperation with the University of Lancaster.

In the beginning of the 1980´s, Hilkka originated work which after more than ten years of continuous effort and international cooperation finally led to an ion chemistry model for the lower ionosphere known as the SIC model (Sodankylä Ion Chemistry Model). In 1981-82 Hilkka worked at the University of Maryland (USA) and in 1993 she worked in the National Institute of Polar Research in Japan. She cooperated fruitfully with colleagues in Russia, leading to extensive scientific results. She had many colleagues both in Europe and the USA. Hilkka was a productive scientist who enjoyed her work. During the last 15 years Hilkka became active in both national and international scientific organizations. She was often asked to referee papers for scientific journals and recently served as a guest editor of the Journal of Atmospheric and Terrestrial physics. In 1995 she became chairperson of the IAGA working group "External forcing of the middle atmosphere". The sudden and totally unexpected death of Hilkka Ranta was a great loss not only to the Sodankylä Geophysical observatory but to the whole scientific community.

Hilkka Ranta is survived by her husband and colleague Aarne and her son Jaakko. She will be missed by her friends all around the world.

Tauno Turunen

Dr. Hilkka Ranta
Photo extracted with permission from the
Sodankylä Geophysical Observatory WWW site
http://space.sgo.fi/

International Association of Geomagnetism and Aeronomy (IAGA)

IAGA is one of the 7 Associations in the International Union of Geodesy and Geophysics (IUGG). The objectives of IAGA are:
a) to promote studies of magnetism and aeronomy of the Earth and other bodies of the solar system, and of the interplanetary medium and its interaction with these bodies, where such studies have international interest;
b) to encourage research in these subjects by individual countries, institutions or persons and to facilitate its international coordination;
c) to provide an opportunity on an international basis for discussion and publication of the results of the researches; and
d) to promote appropriate standardizations of observational programs, data acquisition systems, data analysis and publication.

IAGA holds an Ordinary General Assembly every 4 years in conjunction with each Ordinary General Assembly of IUGG. Between the Ordinary General Assemblies, IAGA holds a Scientific Assembly, often meeting with one of the other Associations of IUGG. IAGA therefore meets every other year. The next Assembly is the 8th Scientific Assembly which is scheduled for 4-15 August 1997 in Uppsala, Sweden.

IAGA has 3 types of publications:
(i) **IAGA Bulletins**, which include the Program and Abstracts of the Assemblies; Geomagnetic Data and Indices; and special Data Summaries or Information Booklets.
(ii) **IAGA News**, which contains items and announcements of general interest to the IAGA community and which is published annually.
(iii) **IAGA Guides** or other manuals which document methods and standards of observation of geophysical phenomena.
The IAGA News is send free of charge to all addresses on the IAGA mailing list and is available on request from the Secretary-General, who also maintains information on availability and price of other IAGA publications.

IAGA welcomes all scientists throughout the world to join in research in "Geomagnetism and Aeronomy". IAGA is subdivided into a number of Divisions and Commissions, many of which have working groups for the study of particular subjects in their general areas of interest. On occasion, these internal IAGA groups issue their own newsletters or circulars. At the IAGA Assemblies, the groups organize specialist symposia, invite scholarly reviews and receive contributed papers which present up-to-the-minute results of current research.

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