



Canadian Meteorological
and Oceanographic
Society

La Société Canadienne
de Météorologie et
d'Océanographie

C.M.O.S. NEWSLETTER/NOUVELLES S.C.M.O.

OCTOBER/OCTOBRE 1989 VOL. 17 NO. 5

CMOS PRIZES FOR 1989

During the Banquet at this year's CMOS Congress in Rimouski, the following prizes were awarded (no awards for "Environmental Citation" or "Media Presentation"):

Presidents's Prize

Dr. R.E. Stewart, Atmospheric Environment Service

J.P. Tully Medal in Oceanography

Dr. R.W. Stewart, Institute of Ocean Sciences

Dr. Andrew Thomson Prize in Applied Meteorology

Dr. J.R. Salmon

Prize in Applied Oceanography

Prof. M.I. El-Sab, Université de Québec à Rimouski

Rube Hornstein Prize in Operational Meteorology

Mr. J. Pearce, Atmospheric Environment Service

Graduate Student Prize

Dr. Hans P.E. Schmid

Reviewer in Meteorology

Dr. Zwiers, Atmospheric Environment Service

Reviewer in Oceanography

Dr. Keith Thompson, Dalhousie University

CMOS LIFE MEMBER

For his significant contributions to meteorology and the Society over several decades, Dr. Byron (Barney) W. Boville has been made a Life Member of the Canadian Meteorological and Oceanographic Society (CMOS).

Barney Boville became a meteorologist in wartime, forecasting at military and civilian stations until 1952, when he joined the staff of the Canadian Meteorological Centre. Educational leave followed, and with his doctorate, he joined the faculty of McGill University and was Chairman of the Department of Meteorology for a period. Returning to the Atmospheric Environment Service in 1972, he became the first director of the Canadian Climate Centre, a year before his retirement in 1979. This was followed by a time in the Secretariat of the World Meteorological Organization in Geneva and, subsequently, he became an Adjunct Professor in atmospheric sciences at York University.

Barney was one of the founders of Atmosphere and has contributed many meteorological papers and articles to the Society's periodicals. He was a member of the national Executive from 1959 to 1967 and served two terms as President. His contributions at Society meetings and on committees have been of great value to CMOS.

ROYAL METEOROLOGICAL SOCIETY

The Royal Meteorological Society announces the availability of their 1990 calendar for distribution. Each month has a colour photograph and weather facts. It is available from the Society's Headquarters at James Glaisher House, Grenville Place, Bracknell, Berkshire RG12 1BX. The cost of each calendar is £2.25 (for 5 or more, £1.80 each) plus postage and shipping.

24th ANNUAL CMOS CONGRESS

Call for Papers

The Vancouver Island Centre of the Canadian Meteorological and Oceanographic Society (CMOS) will host the 24th Annual CMOS Congress at the Royal Roads Military College, Victoria, B.C., May 28 - June 1, 1990.

Theme: Climate Variability: Causes and Consequences

All papers related to physical, chemical and biological aspects of the above theme will be welcome. papers on any topic of interest to CMOS members will also be considered.

Special Sessions

Besides the usual sessions in meteorology, oceanography, chemistry and biology, there will be special sessions on large-scale ocean modelling, on climate and hydrology, on fisheries oceanography and climate, on wind waves and climate, on Lagrangian observations and modelling, and on the chemical and biological aspects of climate change.

The Venue

Victoria is located on Vancouver Island. The nearest airport is located in Sidney (with limousine service to all major hotels in Victoria). The local institutions include the Institute of Ocean Sciences (Department of Fisheries and Oceans) and the University of Victoria.

Contacts for Additional Information

Dr. Rick Marsden (Local Arrangements), Department of Physics, Royal Roads Military College, Victoria, B.C. V0S 1B0 (Tel: (604) 380-4533); Dr. Tad Murty (Scientific Committee), Institute of Ocean Sciences, P.O. Box 6000, Sidney, B.C. V8L 4B2 (Tel: (604) 356-6311).

Deadline

Abstracts must reach the Scientific Committee Chair, at the above address, before February 1, 1990. There will be a \$25 penalty for late submissions (Fax: (604) 356-6390). Information should also be provided on:

- a) Whether the paper is to be presented orally, or as a poster. The Scientific Committee reserves the right to transfer papers to a poster session if there are too many for oral presentation.
- b) Whether there is interest in dormitory-type accommodation for about \$30 per night.

XXIVe CONGRÈS ANNUEL DE LA SCMO

Invitation à présenter des communications

Le Centre de l'île de Vancouver de la Société canadienne de météorologie et d'océanographie (SCMO) sera l'hôte du vingt-quatrième congrès annuel de la SCMO du 28 mai au 1er juin, 1990, au Collège militaire Royal Roads à Victoria, C.-B.

Thème: Les variations du climat: Causes et conséquences

Toutes les communications traitant des aspects physiques, chimiques et biologiques de ce thème sont spécialement bienvenues. Toute autre communication présentant un intérêt pour les membres de la Société sera aussi considérée.

Sessions spéciales

En plus des sessions habituelles en météorologie, océanographie, chimie et biologie, il y aura des sessions spéciales sur la modélisation à grande échelle de l'océan, le climat et l'hydrologie, l'océanographie des pêches et le climat, les vagues du vent et le climat, les observations lagrangiennes et la modélisation, et les aspects chimiques et biologiques des changements du climat.

Endroit

Victoria est située sur l'île de Vancouver. L'aéroport le plus près est à Sidney (service de limousines desservant tous les grands hôtels de Victoria). On compte parmi les organismes locaux l'Institut des sciences de la mer (Ministère des pêches et océans) et l'Université de Victoria.

Pour de plus amples informations

M. Rick Marsden (Comité des arrangements locaux), Département de physique, Collège militaire Royal Roads, Victoria, C.-B., V0S 1B0 (Tél: (604) 380-4533); M. Tad Murty (Comité scientifique), Institut des sciences de la mer, B.P. 6000, Sidney, C.-B., V8L 4B2 (Tél: (604) 356-6311).

Date limite

Les résumés doivent parvenir au responsable du Comité scientifique, à l'adresse ci-dessus avant le 1er février 1990, sous peine d'une amende de 25 \$ (Fax: (604) 356-6390). On devra aussi fournir les informations suivantes:

- a) La communication sera-t-elle orale ou affichée. Remarque: Le Comité se réserve le droit de transférer quelques communications à l'affichage, si trop de communications orales ont été soumis.
- b) Votre intérêt à demeurer à la résidence du Collège, pour environ 30 \$ par nuit.

NEWS FROM CMOS HEADQUARTERS

During the recent Rimouski Congress a number of members expressed the wish for a regular and informative column in the Newsletter with news from CMOS Headquarters and on CMOS activities, developments and plans. The following aims at meeting this wish, and I will do my best to continue providing a similar column in future Newsletters.

With the fall, CMOS activities are again on the increase; Centre meetings will resume and, among other things, make available the CMOS lapel pin to those members who have not yet obtained one. The Ottawa Centre is helping to host a Symposium on Climate Change in the Arctic in October (organized by the Climate Institute of the U.S.A.), and the Newfoundland Centre is holding in November a Workshop on Weather and Climate of Newfoundland and Labrador, co-sponsored by the National Society.

CMOS membership figures are once again on the rise after having suffered a decline in 1987/88 and are again approaching 1000. Some thirty new members joined the Society during the very successful Rimouski Congress. But there are still quite a few former members who have not yet renewed and if you know any please urge them to renew. We have also been encouraging biological, geological and geophysical oceanographers to join the Society and have promised to welcome them with appropriate paper sessions during the Congresses.

The accreditation of consultants is going well; there are now over thirty of them, and we hope to start with the endorsement of media weather broadcasters before the end of the year.

The CMOS Council expects to complete soon a fundamental review of CMOS publications which is being carried out with the help of a consultant for whom we have received an NSERC grant. The aim of the review is to study and, if possible, improve the direction and content of some of our publications, increase readership and decrease financial losses. I hope to be able to give you further news about this in the next Newsletter.

Uri Schwarz

EDITOR'S COLUMN

The Editor would like to see articles on meetings, global projects, special interest groups or any topic that would be of interest to our membership. Black and white photographs may be submitted along with the article.

NOUVELLES DU DIRECTEUR EXÉCUTIF

Au dernier congrès de Rimouski, plusieurs membres ont exprimé le désir de recevoir plus d'information de la direction centrale de la SCMO, de ses activités et de ses plans par la parution régulière d'un article dans le bulletin de Nouvelles. Le présent article a pour but de remplir ce souhait et je ferai de mon mieux pour faire paraître un article semblable dans les éditions futures du bulletin de Nouvelles.

Les activités de la SCMO sont de nouveau à la hausse avec l'arrivée de l'automne; les réunions du Centre reprendront et, entre autres choses, un nouveau bouton à l'effigie de la SCMO sera mis à la disposition des membres qui n'ont pu en obtenir. Le Centre d'Ottawa aide à l'organisation d'un symposium qui se tiendra en octobre sur les changements de climat dans l'Arctique (organisé par le "Climate Institute" des E.U.). Le Centre de Terre-Neuve tiendra en novembre un atelier de travail, conjointement parrainé par la société Nationale, sur la météorologie et le climat de Terre-Neuve et du Labrador.

Le nombre de membres de la SCMO est de nouveau à la hausse après un déclin subi durant les années 1987/88; le nombre de membres approche de nouveau le millier. Quelque trente nouveaux membres ont joint la Société pendant le congrès très réussi de Rimouski. Cependant, il y a encore d'anciens membres qui n'ont pas renouvelé leur abonnement à la Société. Si quelques-uns de ceux-ci sont parmi vos amis, prière de les inciter à rejoindre de nouveau les rangs. La SCMO encourage les océanographes oeuvrant dans les domaines de la biologie, de la géologie ou de la géophysique de rejoindre la Société car des sessions dans ces différents domaines seront certainement tenues lors de nos congrès futurs.

La reconnaissance des consultants par la Société progresse très bien car ils sont maintenant plus de trente. Nous espérons commencer la reconnaissance des diffuseurs de la météo dans les médias avant la fin de l'année.

Le conseil exécutif de la SCMO espère compléter bientôt une révision fondamentale des publications de la SCMO. Cette revue se fait à l'aide d'un consultant pour lequel nous avons reçu une subvention du CRSNG. Le but de la révision est d'étudier et, si possible, d'améliorer la direction et le contenu de quelques-unes de nos publications, d'augmenter le nombre de nos lecteurs et de diminuer les pertes financières. J'espère être capable de vous donner d'autres nouvelles sur ce sujet dans la prochaine édition du bulletin de Nouvelles.

Uri Schwarz

NEWSLETTER DEADLINES

If you wish to submit items for the Newsletter, please send to Malcolm Still, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario. M3H 5T4. The deadline for the December issue is November 27, 1989, and for the February issue is February 1, 1990.

YOUTH SCIENCE FOUNDATION

28th Annual Canada-Wide Science Fair

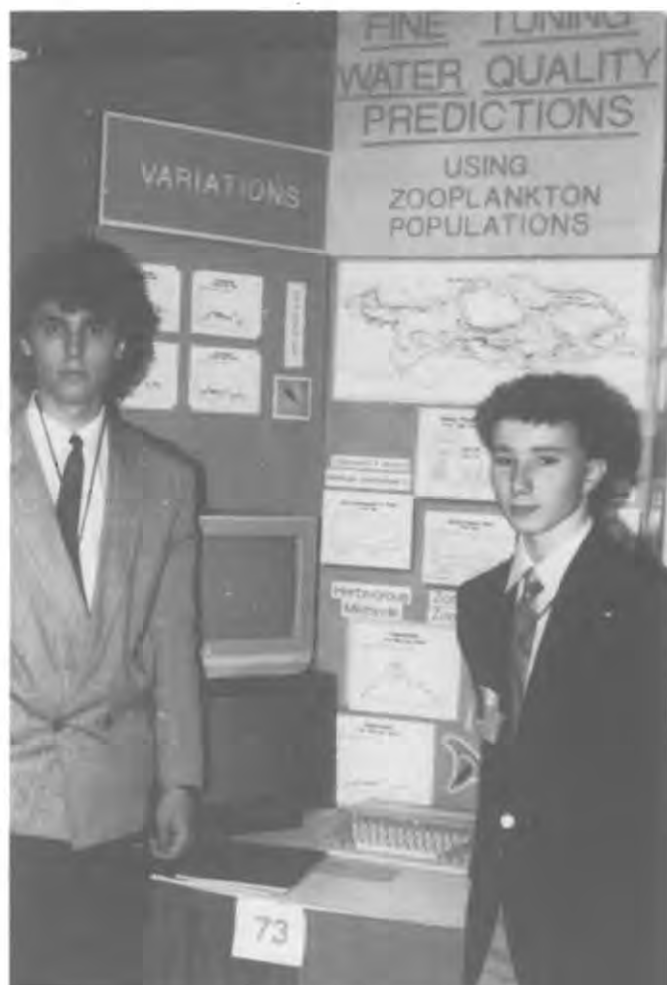


Pierre Hotte and Joe Nimens

The Youth Science Foundation held its 28th Annual Canada-Wide Science Fair at the Memorial University of Newfoundland in St John's, May 13-20, 1989. As well as science educators, school children, government officials, parents and corporate representatives from across Canada, there were guests from Japan, Germany, Sweden and Australia to exchange ideas and to experience the Fair. With the support of industry, government and academia, over 50% of the 313 projects received cash awards, scholarships, trips or summer jobs at research facilities in Canada.

CMOS demonstrated its commitment in promoting an awareness of science in young Canadians by being a part of this Fair and by awarding a prize for the categories of meteorology and oceanography. Dr. Keith Thompson represented CMOS by being the judge and by making the presentations.

The winners were Pierre Hotte and Joe Nimens from North Bay for their project on the total vertical column sampler.



Claude Martel and Richard Marleau

Claude Martel and Richard Marleau, also from North Bay, received honourable mention for their project to fine tune water quality predictions using zooplankton populations.

CLIMATE CHANGE PUBLICATION

Following the successful publication of "Acid Deposition: Sources, Effects and Controls", the British Library intends to publish a volume of collected papers on different aspects of climate change. The volume will be aimed at the international research community and it is expected that selected papers will be presented at a major conference organized by the British Library. If you wish to submit a paper for consideration, please send provisional title and abstract by December 31 to Technical Communications, 100 High Avenue, Letchworth, Herts SG6 3RR, England. The Library is also developing a series of research monographs on major environmental topics and would be interested in receiving details of books that may fit this series.

CMOS AWARDS

The Canadian Meteorological and Oceanographic Society (CMOS) established the Prizes and Awards Committee to focus attention on the achievements of its members and their influence on the sciences of meteorology and oceanography in Canada. Nominations are now being solicited for the various award and prize categories in CMOS. Cooperation of the membership in identifying individuals for whom an award or prize would be appropriate is requested.

Outstanding achievers in the fields of oceanography and/or meteorology should be recognized by their CMOS peers and members of the Canadian community. This awards program is important to CMOS as it brings credit and recognition to those who deserve it. Both media and Society attention is focussed on the recipients, thereby highlighting important work and Canadian contributions to specific science programs. Please give serious consideration to this request. A list of the various awards follows. Please note the established, approved and necessary criteria for each award or prize. It is essential that your written recommendation for a particular award be supported by complete documentation, illustrating that the candidate has met all the category's requirements. The deadline for nominations to be received by J.B. Merrick, Secretary, Prizes and Awards Committee, Atmospheric Environment Service, 1496 Bedford Highway, Bedford, Nova Scotia, B4A 1E5 (Tel: (902) 426-9181), complete with supporting documentation, is Friday, January 26, 1990. Thank you for your participation.

PRIZES AND AWARDS CRITERIA

The criteria listed below are extracted from the bylaws of the Society. Please note the conditions for submitting nominations on the following page.

a) PRESIDENT'S PRIZE

May be awarded each year to an member or members of CMOS for a recent paper, book or contribution of special merit in the field of either meteorology or oceanography. The paper or work;

1. MUST have been accepted for publication in Atmosphere-Ocean, Climatological Bulletin or another refereed journal; or
2. MUST have been presented to the Society membership at a national or local meeting.

b) THE DR. ANDREW THOMSON PRIZE IN APPLIED METEOROLOGY

May be awarded for an outstanding contribution in the field of applied meteorology. The nominee MUST be a member of the Society.

c) GRADUATE STUDENT PRIZES

May be awarded for contributions of special merit in meteorology and/or oceanography by graduate students.

d) THE RUBE HORNSTEIN PRIZE IN OPERATIONAL METEOROLOGY

May be awarded to an individual for providing outstanding operational meteorological service in its broadest sense, but excluding the publication of research papers as a factor, unless that research is already incorporated as an aid in the day-by-day performance of operational duties. The work for which the prize is granted may be cumulative over a period of years or may be a single notable achievement.

e) PRIZE IN APPLIED OCEANOGRAPHY

May be awarded for a significant contribution to the application of oceanography in Canada. The nominee MUST be a member of the Society.

f) THE J. P. TULLEY MEDAL IN OCEANOGRAPHY

May be awarded to a person whose scientific contributions have had a significant impact on Canadian Oceanography.

g) ENVIRONMENTAL CITATIONS

May be awarded to individuals or groups who have in the previous year, made some outstanding contribution in helping to alleviate pollution problems, in promoting environmental improvements, or in developing environmental ethics.

h) CITATION FOR OUTSTANDING RADIO AND TELEVISION WEATHER PRESENTATION

Only Canadian television weather productions will be considered. Any regular ongoing weather program series may be submitted for consideration in the Citation review process. Audio tapes of three consecutive radio broadcasts or VHS recordings of three consecutive telecasts will be required, along with the date and time of the programs, name of the presenter, station, city. Tapes need not be accompanied by written justifications; they will be accepted and reviewed as submitted. However, written justifications would assist the Committee and may accompany the tapes, if desired. Submissions may be made by either Centres or by individual members. VHS tapes are preferred because of the wide variety of Beta formats and costs of renting Beta playback equipment. Submissions should be based on the programs' informative and/or educational value, appeal to the public, a high level of technical and professional presentation.

CMOS AWARDS (continued)

Centres are strongly encouraged to participate in the review of Canadian radio and/or television weather programs in their area. Centres which determine that a routine weather program meets the listed 'Criteria' should consider nominating the program to the Committee. (Centres whose nominations are not selected for a National Award may wish to recognize a regional winner in some way in their own region.)

i) REVIEWERS OF THE YEAR - METEOROLOGY AND OCEANOGRAPHY

Nominations for each of these categories will normally be made by the editors of Atmosphere-Ocean (A-O). A recommendation in each category will be made by the senior editor of A-O and will be forwarded to the Prizes and Awards Committee for inclusion in their annual awards recommendation to the CMOS Council.

Please note:

1. The deadline for submissions is rigidly observed due to other Committee deadlines and the high volume of copying required. Complete submissions must be in the hands of the Secretary by that date. Allow sufficient time for mail or courier. Some couriers do not offer overnight service to Halifax from all regions of Canada. Also, first class mail from Vancouver (for example), has on occasion taken over ten days to reach Halifax. If desired, the Secretary of the Prizes and Awards Committee has access to an automatic telecopier. Please contact the Secretary for the current phone number.
2. Some prize categories specify that a nominee must be a member of CMOS. Nominees in these categories who are not members of CMOS on the date which nominations close will be disqualified and their nomination submissions will not be considered. Membership status will be confirmed by phone through the office of the Executive Director of CMOS.
3. Receipt of submissions by the Secretary will not be acknowledged unless requested. Acknowledgement when requested, will be by telephone.
4. The current title, full address and phone number of the nominee must accompany the submission.
5. Nominees from previous years, who have not received awards may be renominated. All criteria provided above apply to renominations. All renominations must be complete with justification since nomination material is not retained from year to year.

NEW CMOS MEMBERS

NAME

CENTRE

The following new members were approved August 25, 1989:

Dr. Andrew J. Forester (Regular)	Toronto
Dr. Robert M. Moore (Regular)	Halifax
Dr. Richard L. Haedrich (Regular)	St. John's
Miss Davinder Manak (Regular)	Montreal
Mr. Serge Desjardins (Regular)	Halifax
Mr. M.D. Sommerfeldt (Regular)	Saskatoon
Mr. Norman G. Loeb (Regular)	Toronto
Mr. K. Gajewski (Regular)	Quebec
Mr. Gregory T. Leger (Regular)	Halifax
Dr. Marcel C. Hillaire (Regular)	Montreal
CIRAC (Corporate)	Toronto
Mr. Stuart Porter (Regular)	St. John's
Mr. Ken Fluto (Regular)	Winnipeg
Mlle. Jacinthe Lacroix (Student)	Quebec
Mr. D. Mark Smith (Student)	Toronto
Dr. Senhui E. Chen (Student)	United States
Mme. Mireille Lavoie (Student)	Quebec

The following new members were approved September 29, 1989:

M. Gilles H. Tremblay (Regular)	Rimouski
Dr. Jocelyne Pellerin-Massicotte (Regular)	Rimouski
Dr. Juanita N. Gearing (Regular)	Rimouski
Dr. Michel Arnac (Regular)	Rimouski
M. Bruno Vincent (Regular)	Rimouski
Dr. Norman Silverberg (Regular)	Rimouski
Mlle. Anne Mauviel (Regular)	Rimouski
Dr. Jean-Rock Brindle (Regular)	Rimouski
Dr. Bernard Marinier (Regular)	Rimouski
Dr. Yves Paquin (Regular)	Rimouski
Dr. Gaston Desrosiers (Regular)	Rimouski
M. Jacques Dionne (Regular)	Rimouski
Dr. J.F. Dumaïs (Regular)	Rimouski
Dr. Bjorn Sundby (Regular)	Rimouski
Mr. A.R. Fisher (Regular)	Alberta
M. Michel Ferland (Regular)	Quebec
Mme. Marcelle Grenier (Regular)	Quebec
Dr. Grant S. Henderson (Regular)	Toronto
Mr. Michael Hewson (Regular)	Newfoundland
Ms. Ghislain Jacques (Regular)	Quebec
Mme. Anne-Marie Lamothe (Regular)	Quebec
Dr. Robert M. Moore (Regular)	Halifax
Dr. Kristin J. Orians (Regular)	Vancouver
Mr. Amir Shabbar (Regular)	Toronto
Mr. Dario Stucchi (Regular)	Ottawa
Dr. Diana Versegny (Regular)	Toronto
M. Gerald Vigeant (Regular)	Montreal
M. Francois Anctil (Student)	Quebec
Mlle. Marie-Claude Bourque (Student)	Montreal
Ms. Saroja Polavarapu (Student)	Toronto
Mr. Gan Jianping (Student)	Montreal
Dr. Donald C. McKay (Regular)	Toronto

POSITIONS AVAILABLE

OCEAN DYNAMICS

Candidates with a doctorate in physical oceanography, relevant postdoctoral experience, and strong promise of research and teaching excellence are invited to apply for a junior tenure track position in the Department of Oceanography, University of British Columbia. The position is funded through the Atmospheric Sciences Program and involves teaching Oceanography as well as Atmospheric Sciences courses at the graduate and undergraduate levels. Research interests in large-scale ocean dynamics and air-sea interaction and/or satellite oceanography would be an advantage. The position is subject to final budgetary approval.

Applications, together with a curriculum vitae, the names and addresses of three referees, a statement of research interests and sample research publications should be sent to Dr. Paul H. LeBlond, Head, Department of Oceanography, University of British Columbia, Vancouver, B.C., V6T 1W5 (Tel: (604) 228-2482; Fax: (604) 228-6091; Telemail: UBC.OCGY). Salary commensurate with experience. Starting date: July 1, 1990. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents of Canada. The University of British Columbia is committed to the federal government Employment Equity Program and encourages applications from all qualified individuals. Application deadline: November 15, 1989.

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LANSDOWNE CHAIR IN OCEAN SCIENCE

Applications are invited for a new Chair in ocean sciences for the expanded program in Earth System Science of the Centre for Earth and Ocean Research (CEOR), Faculty of Arts & Science, University of Victoria, Victoria, B.C. The successful applicant will be a person of national and international reputation who will enhance and encourage scholarship in the area of theoretical aspects of physical oceanography. The successful candidate will be a member of CEOR and hold an appointment in the Department of Physics & Astronomy in the Faculty of Arts & Science.

The University of Victoria has an enrolment of 11,000 undergraduate students and over 1,300 graduate students. CEOR encourages collaboration between the University and the many government and industrial laboratories nearby involved in earth and ocean research. Within the University there is representation from the Departments of Physics and Astronomy, Geography (Geology), and Electrical and Mechanical Engineering. Principal research areas include underwater acoustics, physical oceanography, geomagnetism, paleomagnetism, continental margin geophysics, seismology, paleontology, stratigraphy, sedimentology and geochemistry.

Salary conditions and benefits are to be negotiated but they will be consistent with comparable senior academic positions in the Faculty. Applications, including full curriculum vitae and the names of three referees, should be submitted to Dr. A.T. Matheson, Dean of Science, University of Victoria, P.O. Box 1700, Victoria, B.C., V8W 2Y2. Deadline for applications is November 1, 1989, or until the position is filled. Additional information may be obtained from Dr. Chris R. Barnes, Director of CEOR at the above address, or telephone (604) 721-8847 (Fax: (604) 721-7715). The University of Victoria offers equal employment opportunities to qualified male and female applicants. Canadian immigration regulations presently require prior assessment of applications from citizens or permanent residents of Canada. Women are particularly encouraged to apply.

Chinook

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Spacious Skies Has Arrived

The sky is a grand stage on which the intricacies of weather are played out by its beautiful and fascinating players, the clouds. The observation of clouds has never received the same degree of respect and acceptance as many other meteorological parameters because they are difficult to categorize, to interpret as data, or to ultimately analyze. But they are, nevertheless, very accurate indicators of the atmosphere's wind/temperature profile, the degree of stability and instability, and the imminent changes associated with an approaching weather event.

The exploration of clouds as an observing tool was highlighted in the books of Richard Scorer. This same approach has been the focus for many years in the photography, writings and presentations of Arjen and Jerrine Verkaik. The Verkaiks' extensive Skyart Collection and experience with cloud observations in North America have teamed up with Scorer's meteorological expertise and long tradition in publishing cloud books to produce 'the ultimate sky book', Spacious Skies.

This 192-page hardcover book contains over 300 captioned photos of which about half are in colour. A free flowing writing and layout style were chosen to make the book more accessible to non-meteorologists but plenty of science accompanies the text to challenge more learned readers. The task was no simple feat, however! Richard Scorer and Arjen Verkiak brought very different writing styles together and operated over a 5000-mile gap for most of the two year preparation period. A common vision and similar experiences made the task both enjoyable and successful, and the book is a unique product of this shared passion for the sky.

Chapter topics range from cumulus to fog, light and optical phenomena, waves, Haboob effects and satellite images, etc., with a special essay on 'skywatching'. A feature of the book is an extensive chapter on severe weather and convective storms, a subject that has become increasingly important following tornado events.

Spacious Skies takes the understanding of weather through clouds to a new plateau of excellence. In it, art and science join hands to take the reader on a fascinating walk through the atmosphere.

The book is published by David & Charles, U.K., and is distributed in Canada by the author, Arjen Verkiak, RR 3, Elmwood, Ontario, N0G 1S0, (519) 363-5785, available at \$45, postage included.

THE OCEANOGRAPHY SOCIETY

The Oceanography Society held its inaugural meeting in Monterey, California, August 1989. More than 500 members attended this landmark meeting of which CMOS was one of the sponsors. Participation covered all fields of marine science. There were no multiple simultaneous sessions: everybody listened to the same speakers and perused the same posters in an unparalleled demonstration of the unity of the field. In an innovative program format, each day was devoted to a broad theme:

"What determines thermohaline and chemical stratification in the ocean?"

"What limits productivity in the oceans?"

"What is the prognosis for observing and describing the ocean?"

There were five review papers for each theme and the rest of the time was available for viewing posters and for private discussions. Prizes were given for the best posters.

Speakers included Henry Stommel, Walter Munk, Jim O'Brien (President of IAPSO), John Knauss (recently named Administrator of NOAA), Robert Corell (NSF), Arnold Gordon (Lamont Doherty), Ed Boyle (MIT) and Francois Morel (MIT). Canadians were well represented at the meeting: Ann Gargett (IOS) gave the first technical paper; Trevor Platt (BIO) chaired the second day; Marlon Lewis (Dalhousie and NASA) and Shubba Sathyendranath (Dalhousie) gave invited talks; and Paul LeBlond (UBC), Kristin Orians (UBC), Peter Smith (BIO), Mike Miyake (IOS) and Gail Gabel (Aanderaa Instruments, Intermarine) attended.

A memorable social occasion was the buffet dinner held at the Monterey Bay Aquarium. Participants could watch the kelp forest wavering and schools of fish dart through the *Macrocystis* fronds in the giant tank. David Packard, its founder and financial backer, had described its genesis during his opening remarks on the first day.

The meeting was a great success and augurs well for the future of The Oceanography Society as a suitable professional association and intellectual focus for hitherto scattered groups of marine scientists. Canadian oceanographers appreciated the lack of national label in the title. Three issues of The Oceanography Magazine have already appeared.

For subscriptions and memberships, please contact The Oceanography Society, 1755 Massachusetts Ave., N.W., Suite 700, Washington, D.C. 20036 (Tel: (202) 232-3900).

Paul LeBlond

AGROMETEOROLOGY IN CANADA

At the last Session of CAgM/WMO (Madrid 1986), it was recommended that all Member Countries prepare a History of Agrometeorology in their respective countries. George Robertson is to undertake this project for Canada. The format of the History will be as follows:

1. Introduction
2. Pre-WW-II activities
3. Post-WW-II activities: Atmospheric Environment Service, Canada Department of Agriculture, provincial Departments of Agriculture and research councils, and agricultural faculties and colleges
4. Forestry (as in 3. above)
5. The role of scientific and professional groups: Expert Committee on Agrometeorology, CMOS, CAMS and AIC
6. International activities by Canadians
7. Annexes: Chronology, and national and international symposia, seminars and workshops held in Canada

This is a formidable task and help is needed from all individuals who were ever involved in this field. To get the facts straight, contributions are welcome regarding histories of individual groups, section, and so forth.

In order that your personal contribution to agrometeorology be given its proper recognition, it would be appreciated if you could prepare a statement on your activities in agrometeorology; your training and prior experience; where and when you worked; and the major contributions made to the advancement of agrometeorology. Include the names of major programs or projects on which you worked and the names of national and international committees, working groups, societies, etc., on which you served and the offices you held. If you pioneered a new phase of agrometeorology at the provincial, university, research or other institutional level it would be worthy of mention. A list of major publications would also be useful. Please send all information to George W. Robertson, P.Ag., P.O. Box 1120, Kemptville, Ontario, K0G 1J0.

CONFERENCES / CONFÉRENCES

La Société canadienne de météorologie et d'océanographie
Le Service de l'environnement atmosphérique

Le troisième atelier de travail sur la météorologie opérationnelle aura lieu du 2 au 4 mai 1990, à l'Université du Québec à Montréal. L'atelier a pour thème "Les Services Météorologiques de l'Avenir".

Le comité responsable du programme est à la recherche d'articles sur les sujets suivants: 1) prévision à courte échéance et méso-météorologie (observations, analyse, diagnostic, techniques de prévision, et diffusion), 2) amélioration du lien entre la recherche et les opérations, 3) besoins des usagers, et 4) bureaux météorologiques de demain. L'atelier sera sous forme de présentations d'articles soumis, de conférenciers invités, de sessions de table-ronde et d'affichages, et de sessions de laboratoires de 1 et de 2 heures. Chaque présentation des sessions d'affichage sera annoncée brièvement dans une session orale appropriée.

Les résumés seront évalués selon leur pertinence avec le thème et leur qualité. Les auteur(e)s seront avisés le 15 décembre 1989 de l'acceptation de leurs articles et des instructions quant au format requis leur seront communiquées par la même occasion. Un recueil des travaux présentés sera préparé et distribué aux participant(e)s.

Pour obtenir des renseignements supplémentaires, veuillez contacter soit Stan Siok (514-283-1139) ou Peter Zwack (514-282-3304), co-présidents du Comité de programme.

Canadian Meteorological and Oceanographic Society
Atmospheric Environment Service

The Third Workshop on Operational Meteorology will be held May 2-4, 1990, at the L'Université du Québec à Montréal. The principal theme of the workshop will be "Weather Services of the Future".

Papers will be presented on the following topics: 1) short-term forecasting and meso-meteorology (observations, analysis, diagnostics, forecast techniques, and dissemination); 2) bridging the gap between research and operations; 3) user requirements; and 4) tomorrow's weather offices.

The workshop will consist of submitted papers, invited papers, panel discussions, and poster and demonstration sessions as well as 1 and 2 hour laboratory sessions. A brief introduction of each poster presentation will be given in an appropriate oral session.

Abstracts will be evaluated on their relevance to the theme as well as on their quality. Authors will be notified by the 15th of December, 1989, with respect to both the acceptance of their abstracts and instructions on the format of their papers. A preprint volume will be prepared and distributed to workshop registrants.

For additional information, contact either Stan Siok (514-283-1139) or Peter Zwack (514-282-3304), Program Committee Co-chairmen.

CONFERENCES/CONFÉRENCES

L'Association pour la prévention
de la contamination atmosphérique (Québec)
Le ministère de l'Environnement du Québec
La commission de la santé
et de la sécurité du travail du Québec
Conservation et Protection, Environnement Canada

Le 4e Colloque sur les Substances toxiques aura lieu du 4 au 5 avril 1990 à Montréal (Québec). Poursuivant les objectifs du 3e Colloque, ce colloque a pour but de favoriser un échange de connaissances et d'information nouvelles. Les thèmes des quatre sessions présentées aborderont les nouveaux enjeux à l'échelle mondiale, les approches de contrôle, les analyses de risque, et NIMBY (pas dans ma cour): comment le gérer.

Pour obtenir des renseignements supplémentaires, veuillez contacter Alain Bernier, Conservation et Protection, Environnement Canada, 1179 rue de Bleury, Montréal H3B 3H9 (Tel: (514) 283-2349).

Governments of Canada & British Columbia

GLOBE 90: Global Opportunities for Business and the Environment will be held in Vancouver, British Columbia, March 19-23, 1990. GLOBE 90 is an international Environment Industry Trade Fair and Conference. For more information, please contact David W.I. Marshall, 1130 West Pender Street, Suite 250, Vancouver, British Columbia V6E 4A4 (Tel: (604) 681-6126).

University of British Columbia
Ministry of Housing, Physical Planning
and Environment, The Hague
Committee on the Challenges of Modern Society
Royal Netherlands Meteorological Institute

The 18th NATO/CCMS International Technical Meeting on Air Pollution Modelling and its Application will be held in Vancouver, British Columbia, May 13-18, 1990.

Canadian Water Resources Association (CWRA)

The 43rd Annual Conference will be held in Penticton, British Columbia, May 16-18, 1990. The objective of the conference is to provide a forum in which innovative approaches to river basin management can be discussed and evaluated. One of sessions will focus on climate change and its effects. For more information, please contact Mr. Robin McNeil (Program Chair) at (604) 387-9472.

Air Pollution Control Association,
Quebec Section
Le ministère de l'Environnement du Québec
La commission de la santé
et de la sécurité du travail du Québec
Conservation et Protection, Environnement Canada

The 4th Symposium on Toxic Substances will be held in Montreal, Quebec, April 4-5, 1990. Following on from the 3rd Symposium, this Symposium will focus on the exchange of the latest knowledge and information on toxic substances. The themes of the four sessions will focus around global emerging issues, control approaches, risk analysis, and the NIMBY syndrome: how to address it.

For more information, please contact:
Alain Bernier,
Conservation and Protection, Environment Canada,
1170 de Bleury street, Montreal, Quebec, H3B 3H9
Tel: (514) 283-2349.

Canadian Society of Agrometeorology

As part of the Agricultural Institute of Canada (AIC) Annual Conference (Theme: "Agri-Resource Interfaces"), the Society is planning a 1-day technical session in Penticton, British Columbia, July 24, 1990. The session provides an opportunity for members to exchange information on research and service activities with agricultural relevance in the range of disciplines from micrometeorology to climatology. The Society is encouraging you to share your information and experiences by submitting a paper for this session. Please send a proposed title for your paper by December 31, 1989, and a 200-word abstract with finalized title by March 1, 1990, to R.J. Williams, Agricultural Climatologist, B.C. Ministry of Environment, 1873 Spall Road, Kelowna, B.C. V1Y 4R2 (Tel: (604) 861-7211).

You are invited to attend the other AIC sessions from July 22-26 to better understand what is happening in the agricultural industry in Canada.

Water Research Center (Government of Egypt)
United Nations Environment Programme

The International Seminar on Climatic Fluctuations and Water Management will be held in Cairo, Egypt, December 11-14, 1989. Abstracts are due July 30, 1989. For more information, please contact Dr. Mahmoud Abu-Zeid, Water Research Center, 22 El-Galaa St., Bulak, Cairo, Egypt (Telex: 20275 WRC UN or Fax: 20-2-773678).

ADVERTISING RATES

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ACCREDITED CONSULTANTS

Entries on the following pages are restricted to CMOS Accredited Consultants. The accreditation process commenced in December, 1986. A complete list of CMOS accredited consultants can be obtained from the Executive Director. Individuals interested in applying for accreditation may contact the CMOS Executive Director at the Society's Ottawa address for a copy of the Guidelines and an application form.

As set out in the document "CMOS Guidelines for Accreditation," the criteria are:

- (1) The applicant must possess an appropriate undergraduate degree from a recognized university.
- (2) The applicant must possess at least one of the following types of specialized training:

- (i) post-graduate degree from a recognized university in meteorology or oceanography;
 - (ii) post-graduate degree from a recognized university in the natural or applied sciences or mathematics, specializing in one or more branches of meteorology or oceanography; or
 - (iii) three years of on-the-job meteorological or oceanographic experience.
- (3) Upon completion of the above educational and training requirements, the applicant must have spent at least two years of satisfactory performance, at the working level, in the field of specialization included in this document. This should include at least some consulting experience.

Noel Boston, P.Eng., Ph.D.

CMOS Accredited Consultant

Physical Oceanography, Boundary Layer Meteorology,
Training

The Environment Centre
Suite 200 - 1130 West Pender Street
Vancouver, British Columbia V6E 4A4 Canada
Tel: (604) 681-8828 Fax: (604) 681-6825

David R. Hudak, Ph.D.

CMOS Accredited Consultant

Cloud Physics, Synoptic Meteorology,
Weather Modification

KelResearch Corporation
850-A Alness Street, Suite 9
Downsview, Ontario M3J 2H5 Canada
Tel: (416) 736-0521

ACCREDITED CONSULTANTS

Susan K. Lally

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Oceanroutes Canada Inc.
Swire House, 271 Brownlow Avenue
Dartmouth, Nova Scotia B3B 1W6 Canada
Tel: (902) 468-3008 Fax: (902) 468-3009

Tom B. Low, Ph.D., P.Eng.

CMOS Accredited Consultant
Research and Development Meteorology

KelResearch Corporation
850-A Alness Street, Suite 9
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Halifax, Nova Scotia B3J 3N2 Canada
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Prof. T.R. Oke, B.Sc., M.A., Ph.D.

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Boundary-Layer, Applied Climatology

3776 West 39th Avenue
Vancouver, British Columbia V6N 3A7 Canada
Tel: (604) 228-2900 Res: (604) 263-7394

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3650 Carnarvon Street
Vancouver, British Columbia V6L 3E4 Canada
Tel: (604) 228-6407 Home: (604) 733-1255

Brian Wannamaker

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Physical Oceanography, Sea Ice/Icebergs

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Caledon East, Ontario L0N 1E0 Canada
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Markham, Ontario L3R 4G8 Canada

Tel: (416) 477-4120

Telex: 06-966599(MEP MKHM)

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Atlantic Weather & Environmental Consultants Ltd.

112 Bloor Street

Fredericton, New Brunswick E3A 2K4 Canada

Tel: (506) 450-8802

Richard J. Kolomeychuk, M.Sc.

CMOS Accredited Consultant

Applied Meteorology and Climatology
Hydrometeorology

The Environmental Applications Group Ltd.

Suite 1006, P.O. Box 2041, 20 Eglinton Ave. W.

Toronto, Ontario M4R 1K8

Tel: (416) 322-5701

Fax: (416) 322-5706

Mike Lepage, M.S.

CMOS Accredited Consultant

Wind Engineering, Climatic Data Management,
Air Pollution Meteorology, Climate Research

Rowan Williams Davies & Irwin Inc.

650 Woodlawn Road West

Guelph, Ontario N1K 1B8 Canada

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Fort McMurray, Alberta T9H 3E3 Canada

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Toronto, Ontario M3H 2V2 Canada

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Suite 101, 9865 W. Saanich Road

Sidney, British Columbia V8L 3S3 Canada

Tel: (604) 655-1944

Fax: (604) 655-7131

La Société Canadienne de Météorologie et d'Océanographie The Canadian Meteorological and Oceanographic Society

La Société Canadienne de Météorologie et d'Océanographie (SCMO) a pour but de stimuler tous les aspects de la météorologie et de l'océanographie au Canada. Sa constitution date de juin 1977, alors que la Société Canadienne de Météorologie, établie en janvier 1967, a reconnu la croissance et les contributions dues à l'activité de sa section d'océanographie et a changé son nom. Toute personne ou organisation intéressée à la météorologie et/ou à l'océanographie peut en devenir membre. Les treize centres locaux et sections de la Société fournissent aux membres autant de lieux pour discuter et recevoir des conférenciers invités. Les membres qui ont des intérêts particuliers à l'hydrologie, à la pollution de l'air, à l'agriculture, à la météorologie d'exploitation ou à la glace dérivante sont encouragés à joindre des groupes d'intérêts spéciaux au sein de la Société.

La Société organise un Congrès annuel au printemps d'une durée de trois jours où l'on présente et discute des exposés, où l'on distribue des récompenses et où l'on tient la réunion générale annuelle. L'emplacement choisit pour le congrès varie selon le centre qui en est l'hôte. La Société publie quatre périodiques, comprenant le Bulletin de nouvelles de la SCMO. Le Bulletin publie des lettres, des avis, des revues de livres et d'autres communications d'intérêt pour les membres. ATMOSPHERE-OCEAN est le journal scientifique trimestriel qui renferme des articles sur tous les aspects de la météorologie et de l'océanographie, de même que des notes, lettres et revues de livres appropriées. Le Bulletin climatologique est un journal qui renferme des articles et des notes d'intérêt sur la climatologie. Il est publié trois fois par année. Chinook est un périodique trimestriel qui publie des articles plus généraux sur les thèmes météorologiques et océanographiques. Le Bulletin de nouvelles de la SCMO est distribué sans frais additionnels à tous les membres. Les membres peuvent souscrire aux autres périodiques par abonnement à taux favorables.

Les demandes d'adhésion sont approuvées par le bureau d'administration à ses réunions mensuelles. Les demandes d'adhésion et d'abonnement reçues après le 1^{er} octobre sont pour l'année suivante à moins qu'elle soit requise pour l'année en cours.

Le Conseil de la SCMO pour 1989/90

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The Canadian Meteorological and Oceanographic Society (CMOS) exists to advance all aspects of meteorology and oceanography in Canada. It assumed its present constitution in June 1977. This development recognized the growth and contributions of an active Oceanographic section within the parent Canadian Meteorological Society established in 1967. Membership in the Society is open to individuals and organizations with interests in the fields of meteorology and/or oceanography. Through its thirteen local Centres and Chapters, the Society provides a forum for members to participate in discussions and hear guest speakers. Members with special interests in the fields of hydrology, air pollution, agriculture, operational meteorology or floating ice are encouraged to join Special Interest Groups within the Society.

The Society sponsors an annual Congress each spring, usually lasting three days, where papers are presented and discussed, various awards are given, and the yearly business meeting is held. The location of the Congress varies, with the local Centres serving as hosts. The Society publishes four periodicals, including the CMOS Newsletter. The Newsletter carries correspondence, notices, book reviews and other items of general interest to members. ATMOSPHERE-OCEAN is a quarterly scientific journal containing articles on all aspects of meteorology and oceanography as well as relevant notes, correspondence, and book reviews. The Climatological Bulletin contains articles and notes of particular interest to the field of climatology. The Bulletin is published three times a year. Chinook is a quarterly magazine giving a more general treatment to meteorological and oceanographic themes. The Newsletter is distributed to all members free of charge while the other publications are available at favourable subscription rates.

New members are accepted into the Society by the National Executive at their monthly meetings. Applications and subscriptions received after October 1 are for the following year unless requested for current year.

CMOS 1989/90 Council

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Note: Les membres étudiants reçoivent une des publications SCMO et doivent indiquer la publication gratuite désirée. Tous les périodiques sont envoyés aux membres corporatifs et soutiens.

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OCTOBER/OCTOBRE

Vol 17 No.5

See over/au verso

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Please enroll me as a member of the Society. I attach a cheque for \$ _____ payable to the Canadian Meteorological and Oceanographic Society for the membership fee and/or publication subscriptions. I also include a tax-deductible donation of \$ _____ for (check one):

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Signature

Faire parvenir à la SCMO la demande d'adhésion complétée à l'adresse au dessus.