c.m.o.s.
NEWSLETTER / NOUVELLES
s.c.m.o.

FEBRUARY/FÉVRIER 1984 VOL. 12 NO. 1

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Society Logo

The Council, at its Second Meeting (1983/84) has approved a new Logo, based on the majority view of the members as expressed during the recent mail ballot. The new Logo (Number 5 in the August and October 1983 Newsletters) will be used on the 1984 Congress publications and officially announced by the President at the Annual General Meeting.

Meeting of WMO Bureau

The WMO Bureau is the "inner Cabinet" of the WMO ruling body, the Executive Committee. It consists of the WMO President, the three Vice-Presidents, the Secretary General, and certain invited persons. Mr. J.P. Bruce, the Assistant Deputy Minister, Environment Canada and Head of the Atmospheric Environment Service is one of these Vice-Presidents, and at his invitation the Bureau held its yearly meeting in Canada (January 31 - February 2, 1984). On February 1, 1984 the Minister of the Environment, the Hon. Charles Caccia gave a dinner in its honour to which CMOS was invited. Here too the Executive Director represented the Society. Among the participants were the Directors of the Australian, Chinese, Ethiopian, Philippines, Uruguayan, USA and USSR Meteorological Services. At the suggestion of Dr. J.W. Zillman, the Director of the Australian Meteorolgical Service, an exchange of publications between the Australian Meteorological Society (a branch of the Royal Meteorological Society) and CMOS was agreed upon.

CMOS CONGRESS
Options for Improving the Quality of Scientific Programs

In response to comments from concerned CMOS members, CMOS Council is in the process of reviewing options for improving the quality of the scientific program. Congress provides a forum for all scientists in Canada engaged in operational and research activities in meteorology and oceanography. One would expect that the caliber of papers should be high enough to attract international scientists.

Are we going about it the right way? Should there be changes to Congress format? Is it getting too big? How can special interest groups have an effective input? Should there be a pre - or post conference proceedings? How long should be allotted for presentation of papers? There are but a few of the questions which have to be considered.

Dr. Barry Goodison, CMOS Councellor-at-large is in the process of reviewing this issue. Members who have concerns about improving the quality of Congress are asked to forward their suggestions by March 30, 1984 to Barry for consideration and inclusion in the review. Please send your comments to:

Dr. Barry Goodison
Hydrometeorology Division
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
M3H 5T4

CMOS represented at inauguration of new AES supercomputer

CMOS was invited to take part in the formal inauguration of the new AES supercomputer reported on elsewhere in this paper. As the President and the Vice-President were outside the country, the Executive Director attended on their behalf and made useful contacts with other invited guests. These included Dr. K. Spengler, the Executive Director of the American Meteorological Society, with whom details concerning the CMOS/AMS meetings planned to take place in Montreal in 1985 were discussed.

Membership Campaign

Our yearly membership campaign is going well and renewals and new membership applications have been coming in at a good rate. As expected, subscriptions for Chinook have risen appreciably, while those for Atmosphere-Ocean have so far been ordered by some 60% of those renewing. Demand for the Climatological Bulletin is also satisfactory. There are however considerable numbers of renewals or new applications that do not include orders for any subscriptions (about 25%). This may, in some cases, be due to a misunderstanding of the new fee structure, according to which, except for student members, the basic fee ($20.00 for regular members) does not include subscriptions to any Society publication except the Newsletter. Members or applicants for membership are

urged to subscribe to as many Society publications as possible, taking into account that these publications are, in comparison with similar publications abroad, not unduly expensive, that their contents are of a high standard, and that the Society needs the financial support of members in its publishing efforts.

EDITORIAL POLICY

The CMOS NEWSLETTER is the principal medium by which Society members may exchange items of CMOS news and interest. It is a bi-monthly publication mailed to all members and, except for advertising revenue, is funded through Society membership fees. Articles are accepted in either official language, and responsibility for content rests with their respective authors. Although views expressed are not necessarily those of CMOS, the editorial staff shall endeavour to maintain a level of integrity deserving of the Society.

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LA POLITIQUE EDITORIALE

Le BULLETIN DE NOUVELLES de la SCMO est la voie principale par laquelle ses membres peuvent échanger des articles d'information et d'intérêt. C'est une publication bimestrielle qui est expédiée à tous les membres et qui, sauf pour les revenus de la publicité, est financée par les frais d'adhésion. Les articles sont acceptés dans l'une ou l'autre des langues officielles et le contenu demeure la responsabilité de l'auteur. Même si les idées exprimées ne sont pas nécessairement celles de la SCMO, la rédaction tentera de maintenir un niveau d'intégrité digne de la société.

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NEWSLETTER SCHEDULE

It is planned that the C.M.O.S. Newsletter will be published five times per calendar year. Deadlines for the input to these issues will be approximately two weeks prior to the mailing dates, as listed below:

	Mailing Dates	Press Deadlines
1st	February 28	February 14
2nd	June 30	June 15
3rd	August 31	August 15
4th	October 31	October 15
5th	December 31	December 10

Proposals for Amendments to CMOS Constitution and By-Laws

Introduction

As members are aware, a special committee, under the chairmanship of Professor E.P. Lozowski, has been working for some time on a general revision of our Constitution and By-Laws to bring them up to date and align them with new requirements and circumstances. This work is somewhat complicated and could not be completed in time for the 1984 Annual General Meeting (AGM). In the meantime, a number of circumstances have arisen which, in the opinion of the Council, require urgent changes to the Constitution and By-Laws and which therefore are being referred to the 1984 AGM.

This announcement constitutes the notice of motion for amendments to these instruments, as required by Article 5 a) and By-Law 1 a), the motions being made in the name of all members of the Council (Council Meeting No. 2 (1983/84), held on February 16-17, 1984).

The circumstances which, in the opinion of the Council, require urgent amendments are:

A) **Incorporation of the Society under the Canada Corporations Act.** The Council has for some time recognized the need for this step, particularly in the light of legal advice concerning the financial liability of elected officers in a Society that is not incorporated.

Several actions, such as the acquisition of Chinook, have to be held in abeyance until after the Society has become incorporated. In order to meet the requirements of the Canada Corporations Act, particularly Sub-section 155(2), the amendments proposed below are necessary to make the Constitution and By-Laws acceptable for incorporation.

B) **Difficulties with financial and organizational arrangements.** Inflation and organizational developments have made a number of provisions in the present By-Laws out of date, hindering the efficient handling of the Society's affairs by the responsible officers. A limited number of amendments are therefore proposed to provide urgently needed remedies. Also proposed is a new award in oceanography (the J.P. Tully Medal).

Note: The proposals for amendment are labelled A) or B) indicating to which of the above-mentioned categories they belong.

Amendments proposed to CMOS Constitution and By-Laws

Proposed Text

ARTICLE 1 - Name and Seal

A) The name of the Society shall be the Canadian Meteorological and Oceanographic Society - La Société canadienne de météorologie et d'océanographie. Its corporate seal shall be the impression stamped at the head of this Constitution.
(Remark: Add agreed logo at head of Constitution)

ARTICLE 5 - Changes to the Constitution

A) a) Notice of motion for changes to the Constitution (enactments, repeals or amendments) shall be delivered in writing over the signatures . . (rest unchanged).

b) (Unchanged).

A) c) Any such changes to the Constitution shall not be enforced or acted upon until the approval of the Minister of Consumer and Corporate Affairs has been obtained.

BY-LAW 1 - Changes to By-Laws

A) a) Notice of motion for changes to By-Laws (enactments, repeals or amendments) shall be delivered in writing over the signatures . . (rest unchanged).

b) (Unchanged).

A) c) Any such changes to the By-Laws shall not be enforced or acted upon until the approval of the Minister of Consumer and Corporate Affairs has been obtained.

BY-LAW 2 - Membership

(a) to c) Unchanged).

A) d) Any member may resign from the Society by submitting to the Society a written resignation.

A) e) Each member in good standing shall have the right to exercise one vote.

BY-LAW 4 - Officers of the Society

(a) to h) Unchanged).

A) i) Officers of the society may be removed from office by a vote of the body that elected them. A two-thirds majority of those voting is required for such removal.

A) j) Elected officers of the Society shall not be remunerated for their services, but may be reimbursed for expenses incurred on behalf of the Society as may from time to time be approved by the Executive.

BY-LAW 5 - Duties and Powers of the Executive and Council

(a) and b) Unchanged).

B) c) The Council and/or the Executive may by telephone conference call or other means when their respective members are unable to assemble in one place.
(Renumber c) to g) as d) to h).)

h) Duties of the Treasurer

1) (Unchanged).

B) 2) (As present 2) but amend "five hundred dollars ($500.00)" to read: "two thousand dollars ($2000.00)" in the first and second sentence.)

i) (Unchanged).

A) j) Duties of the Corresponding Secretary

1) and 2) (Unchanged).

3) The Corresponding Secretary shall have the custody of the corporate seal of the Society and shall certify documents issued by the Society.

4) (As present No. 3).

Appendix to By-laws

CANADIAN METEROLOGICAL SOCIETY AWARDS AND PRIZES

(a) to e) Unchanged).

B) f) **The J.P. Tully Medal in Oceanography**

The J.P. Tully Medal in Oceanography is awarded to a person whose scientific contributions have had a significant impact on Canadian oceanography.

Propositions d'amendements à la constitution et aux règlements

Introduction

Comme les membres le savent, un comité spécial, présidé par le professeur E.P. Lozowski, s'active depuis quelque temps à réviser entièrement notre constitution et nos règlements pour les mettre à jour et les adapter aux circonstances et aux besoins nouveaux. Ce travail étant plutôt complexe, il ne fut pas possible de le terminer à temps pour l'assemblée générale annuelle (AGA) de 1984. Entretemps, certaines circonstances ont fait que, de l'avis du conseil d'administration, des changements pressants doivent être apportés à la constitution et aux règlements, et être par conséquent soumis à l'AGA de 1984.

Cette annonce constitue un avis écrit de motion pour amender ces actes, tel que requis par l'article 5a) et le règlement 1a), ces motions étant présentées au nom de tous les membres du conseil d'administration (réunion de conseil d'administration des 16 et 17 février 1984).

Les circonstances qui de l'avis du conseil d'administration créent le besoin de changements pressants sont:

A) **Constitution de la Société suivant les dispositions de la Loi sur les corporations canadiennes.** Le conseil d'administration est conscient de cette exigence depuis quelque temps déjà, surtout à la lumière des avis juridiques concernant la responsabilité des membres du bureau d'une société non constituée.

Plusieurs actions, comme par exemple l'acquisition de Chinook, doivent attendre que la Société soit dûment constituée. Afin de satisfaire à toutes les exigences de la Loi sur les corporations canadiennes, particulièrement au paragraphe 155(2), les amendements proposés ici sont nécessaires pour que la Constitution et les Règlements soient juridiquement acceptables pour réaliser l'acte de constitution.

B) **Difficultés budgétaires et problèmes d'organisation.** L'inflation et des changements d'organisation ont rendu démodées quelques dispositions des règlements actuels. Les membres responsables du bureau ne peuvent plus accomplir efficacement le travail de la Société à cause de ces difficultés. Un petit nombre d'amendements sont donc proposés afin de remédier aux problèmes pressants.

Note: Les propositions d'amendements sont désignées A) ou B) et se réfèrent aux catégories susmentionées.

Amendements proposés à la constitution et aux règlements de la SCMO

Texte proposé

ARTICLE 1 - Nom

A) Le nom de la société est la Société canadienne de météorologie de d'océanographie - The Canadian Meteorological and Oceanographic Society. Le cachet réglementaire est le symbole imprimé à la tête de ce document. (Note: Ajouter le cachet réglementaire convenu à la tête de ce document).

ARTICLE 5 - Modifications à la constitution

A) a) Pour modifier la constitution, un avis écrit de motion, portant les signatures.... (le reste inchangé).

b) inchangé.

A) c) Toute modification ainsi apportée à la constitution n'entrera pas en vigueur et ne sera pas mis en force avant d'avoir obtenu l'approbation du ministre le la Consommation et des Corporations.

RÈGLEMENT 1 - Modifications aux règlements

A) a) Pour modifier les règlements (promulgation, abrogation ou amendement) un avis écrit de motion portant les signatures... (le reste inchangé).

b) inchangé.

A) c) Toute modification ainsi apportée aux règlements n'entrera pas en vigueur et ne sera pas mis en force avant d'avoir obtenu l'approbation du ministre de la Consommation et des Corporations.

RÈGLEMENT 2 - Adhésion

(a) à c) Inchangés).

A) d) Un membre peut démissionner de la Société en présentant une lettre de démission.

A) e) Tout membre en règle a droit d'exercer un vote.

RÈGLEMENT 4 - Membres du bureau de la Société

(a) à h) Inchangés)

A) i) Les membres du bureau de la Société peuvent être relevés de leurs fonctions par un vote du corps électoral qui les a élus. Pour ce faire, une majorité de deux tiers des votants est requise.

A) j) Les membres élus du bureau de la Société ne sont pas rémunérés pour leur travail, mais ils peuvent être remboursés pour les dépenses encourues dans l'exercise de leurs fonctions si le bureau l'autorise.

RÈGLEMENT 5 - Fonctions et pouvoirs du bureau et du conseil d'administration

(a) et b) Inchangés)

B) c) Quand les membres du conseil d'administration ou du bureau ne peuvent se réunir en un même lieu, ils peuvent tenir des réunions à l'aide de conférences téléphoniques ou par d'autres moyens.

(Replacer c) à g) par d) à h).)

h) Fonctions du trésorier

1) (Inchangé).

B) 2) Inchangé sauf que cinq cents dollards (500 $) doit être iè remplacé par deux milles dollards (2000 $) dans la premre et deuxième phrases.

i) (Inchangé).

j) Fonctions du secrétaire-correspondant

1) et 2) (Inchangés).

A) 3) Le secrétaire-correspondant a la garde du cachet réglementaire de la Société et certifie la légalité des documents émis par la Société.

4) le numéro 3) actuel.

Appendice aux Règlements

PRIX ET RÉCOMPENSES DE LA SOCIÉTÉ CANADIENNE DE MÉTÉOROLOGIE ET D'OCEANOGRAPHIE

(a) à e) Inchangés).

B) f) **La Médaille J.P. Tully en océanographie**

La Médaille J.P. Tully en océanographie est décernée à une personne dont l'apport scientifique a eu un impact significatif sur le domaine de l'océanographie au Canada.

Donations

Still on the subject of financial support, it has been noticed that the membership application form lacks a specific space for donations (the membership renewal form does provide for this). New as well as old members are urged to consider making donations to the Society over and above their membership fees/subscriptions, so as to assist the Society in carrying out its many tasks aimed at furthering Canadian Meteorology and Oceanography. One relatively painless way of making such a donation would be to donate the difference between the old membership fee ($40.00) and the new fee plus subscriptions. If he subscribes for example to Chinook ($7.50) then this difference would be $2.50.

AGRICULTURE AND FORESTRY S.I.G.

Notes from AGRIFORMET Vol. 1 issue 2:

During the 1983 Congress at Banff, eleven members of the Special Interest Group attended to discuss a wide range of topics. A brief summary of these is as follows:

- The name of the newsletter "AGRIFORM" is now "AGRIFORMET". It is to act as a medium for exchange of information amongst members.
- A list of SIG members will be distributed to all members and it will be available by the 1984 congress. Current membership is fifty-five.
- Increased exposure of the SIG is desired within CMOS.
- The terms of the current executive were extended to the time of the 1984 Congress.
- No major problems were identified with respect to the constitution, proposed by the CMOS executive for adoption by all the SIG's.
- Research Activities within the Faculty of Agriculture at McGill:
- P.J. Schuepp:
  - Carbon dioxide flux measurements from low-flying aircraft and ground referencing of carbon dioxide and sensible heat fluxes;

    Determination, by eddy-correlation sampling technique and trajectory simulation model, of the nitrogen losses through volatilization of ammonia from surface applied manure;

    Determination and prediction of fluxes of sensible heat and moisture in two-and three dimensional nonsteady airflows;

    Laboratory simulation of selected aspects of heat and mass transfer, including aerosol deposition on foliage elements within complex surface structure.
- N.N. Barthakur:
  - Studies of the winter mortality of plum curculio as a function of micro-meteorological parameters of their overwintering sites;

    The beta-ray gauge as a useful agrometeorological instrument is being explored in measuring dew formation and rate of evaporation from foliage surfaces;

    Heat and mass transfer studies of live plants in a wind tunnel are being investigated by using microwave energy.
- R.H. Douglas:
  - Current research seeks to determine the frequency at which consecutive observations (of daily maximum and minimum temperatures, and daily precipitation) at a "temporary" station must be made in order to establish a useful relationship between that station and the nearest longterm climatological station.
- Other related studies within the Canadian Climate Centre:
  - The study of the frequency, extent and severity of historical drought on the Canadian Prairies (nearing completion); A second report will examine the statistical nature of drought on the Canadian Prairies in terms of time-space relationships of estimated soil moisture values;
  - A study of oxidant climatology of Ontario;
  - The FARMFOR proposal; Synoptic weather typing; The application of phenology as a forest/climate tool and a possible study of impacts of climate change, possibly focussing on agriculture in Saskatchewan.

Meetings:

- A second meeting of the CFS-AES CCP Working Group on Forest Meteorology was held June 7-8, 1983 at the Petawawa National Forestry Institute.

- The Agrometeorological Workshop on the role of long range transport and weather in agriculture sponsored by the Ontario Agrometeorological Research Committee was held at the University of Guelph on October 19, 1983. Proceeding of this workshop should be available during the first quarter of 1984.

- The Forest Environmental Measurement Conference held in Oak Ridges, Tennessee October 24-28, 1983 was an excellent review of the state-of-the-art of forest meteorology. Published proceedings are expected within the 1984-85 fiscal year.

- A special session on agriculture and forest meteorology has been scheduled during the 18th Annual Congress of the Canadian Meteorological and Oceanographic Society at Dalhousie University.

NEW MEMBERS

James H. Alexander	Orleans
Henry C. Hengeveld	Downsview
Donald C. McKay	Burlington
Gerald Reichheld	Wellington
Kunio Shirasawa	St. John's
Clive Temperton	Dorval
Robert Tessier	Chelsea
Chen Ti Hoon Thierry	Toronto
Ken W. Asmus	Ottawa
Jean-Guy Cantin	Laval
Mr. Scott A. Akenhead	St. John's, Nfld.
Mr. D.W. Coleman	Halifax, N.S.
Dr. John R.N. Lazier	Dartmouth
Dr. Helmuth Sandstrom	Dartmouth
Dr. William Allan Perrie	Dartmouth
Dr. B.J. Topliss	Dartmouth
Dr. J.F. Dumais	Rimouski, P.Q.
Dr. Emilien Pelletier	Rimouski
Mr. John Hall	Ottawa, Ont.
Miss Cathryn Bjerkelund	Ottawa
Mr. L.A. Trecarten	Ottawa
Dr. James R. Salmon	Toronto
Ms. Susan Dunlop	Winnipeg, Man.
Mr. Jay Anderson	Winnipeg
Mr. Bruce Allan Brasnet	Edmonton, Alta
Dr. Michael W. Stacey	Sidney, B.C.
Dr. John E. Papadakis	Sidney
Dr. Andrew F. Bennett	Sidney
Dr. Howard J. Freeland	Sidney
Dr. Greg Holloway	Sidney
Dr. David Farmer	Saanichton

Student Members

James Cummine	Winnipeg
Nils Robert Ek	Edmonton
Patricia Forge	Edmonton
Fred Hopper	Edmonton
Alan Kelm	Saskatoon
C. Gordon Kirk	Edmonton
Katherine Klink	Neward, DE
Allan Pankratz	Edmonton
Robert van Wyngaarden	Montreal
Beverly Trefan	Edmonton
Robert J. Lessard	Edmonton
Myriam Bormans	Halifax
Mr. Dan Kelley	Halifax, N.S.
M. Yves St-Jacques	Laval, P.Q.
Mr. John Pomeroy	Saskatoon, Sask.
Mr. David Pan	Edmonton, Alta.
Mr. Ford Doherty	Vancouver, B.C.

Canada and the World Meteorological Organization

The World Meteorological Organization (WMO) is a specialized agency of the United Nations which was created in 1951. The WMO currently consists of 157 Members (152 States and 5 Territories). The WMO was established with a view to coordinating, standarizing and improving world meteorological and related activities and to encouraging an efficient exchange of meteorological and related information between countries in the aid of human activities.

The WMO consists of the following constituent bodies:

1. The Congress, which is the general assembly of delegates representing Members and as such is the supreme body of the Organization. Congress meets every four years to determine general policies for the fulfillment of the purposes of the Organization.

2. The Executive Council comprises the President and three Vice-Presidents of WMO, the Presidents of Regional Associations and 26 elected members. The Council meets annually and is responsible to Congress for the coordination of the approved program and for the utilization of its budgetary resources in accordance with the decision of Congress.

3. Regional Associations are composed of the Members of WMO, whose task is to coordinate meteorlogical and related activities within their respective regions. The world is divided into six regions with Canada belonging to Region IV, North and Central America. Regional Associations meet every four years.

4. Technical Commissions which are established by Congress are responsible for the technical and scientific programs of WMO. The eight Technical Commissions are made up of experts nominated by the Members of WMO and meet every four years.

5. The Secretariat of the Organization is located in Geneva, Switzerland, and is composed of a Secretary-General, Deputy-Secretary General and about 246 scientific, technical and clerical staff. The Secretary-General is appointed by Congress for a four-year period.

The current principal programs of WMO are:

a) World Weather Watch
b) World Climate Programme
c) Research and Development
d) Hydrology and Water Resources
e) Education and Training

In keeping with global economic conditions, there has been "zero growth" in WMO activities in recent years. The annual WMO budget is just under $20 million and Canada's annual contribution is less than 3% of the total, or about $450,000.

Benefits to Canada and Canadian Participation

The most obvious benefit of WMO to Canada is the availability of daily meteorological data in a common, standard format from all areas of the globe in which we are interested. The definition of terms, the times of observation and data transmission, the digital codes and units of measurement used, have all been agreed to within WMO and, consequently, the data, analyses and forecasts are understandable and useable by all regardless of language. Hemispheric and global data are essential today for use in complex mathematical models and high speed computers for better weather forecasts. Through participation in international research and development programs, we have immediate access to knowledge and techniques we could never hope to obtain independently because of the resources required. Finally, through its participation in WMO Canada provides technological aid to the developing countries and fosters better understanding amongst nations of the world.

Organisation Météorologique Mondiale

L'Organisation météorologique mondiale (OMM) est un organisme spécialisé des Nations Unies créé en 1951. A l'heure actuelle, l'OMM comprend 157 membres (152 états et 5 territoires). Sa création vise à coordonner, uniformiser et améliorer les activités météorologiques et connexes mondiales et à encourager entre les états un bon échange de renseignements météorologiques et connexes pour appuyer les activités humaines.

L'OMM comprend les corps constitutifs suivants :

1. Le Congrés, assemblée générale de délégués représentant les membres et, à ce titre, corps suprême de l'Organisation. Le Congrès se réunit tous les quatre ans pour déterminer les lignes de conduite qui permettront de réaliser les objectifs de l'Organisation.

2. Le Conseil directeur comprend le président et trois vice-présidents de l'OMM, les présidents des Associations régionales et 26 membres élus. Le Conseil, qui se réunit tous les ans, répond devant le Congrès de la coordination du programme approuvé et de l'utilisation de ses ressources budgétaires en conformité avec la décision du Congrés.

3. Les Associations régionales se composent des membres de l'OMM, dont la tâche consiste à coordonner les activités météorologiques et connexes dans leur région respective. Le monde est divisé en six régions, le Canada faisant partie de la région IV, Amérique de Nord et Amérique centrale. Les Associations régionales se rencontrent tous les quatre ans.

4. Les Commissions techiques, établies par le Congrès, sont responsables des programmes techniques et scientifiques de l'OMM. Les huit Commissions techniques, qui se réunissent tous les quatre ans, se composent d'experts désignés par les membres de l'OMM.

5. Le Secrétariat de l'Organisation est situé à Genève, en Suisse, et se compose du secrétaire général, du sous-secrétaire général et d'environ 246 scientifiques, techniciens et employés de bureau. C'est le Congrès qui nomme le secrétaire général pour une période de quatre ans.

Voici, à l'heure actuelle, les principaux programmes de l'OMM :

a) La veille météorologique mondiale
b) Le programme climatologique mondial
c) La recherche et le développement
d) Les ressources hydrologiques et en eau
e) L'éducation et la formation

Ces dernières années, les activités de l'OMM n'ont connu aucune croissance, fait reflétant les conditions économiques mondiales. Le budget annuel de l'OMM atteint presque 20 millions de dollars et la part annuelle du Canada est de moins de 3 % de ce total, soit environ 450 000 $.

Avantages pour le Canada

L'avantage le plus évident de l'OMM pour le Canada, c'est de pouvoir disposer, pour les régions qui l'intéressent, de données météorologiques quotidiennes émanant de toutes les régions du globe et présentées d'une manière uniformisée. Au sein de l'OMM, on s'est entendu sur la définition des termes, les heures d'observation et de transmission des données, les codes numériques et les unités de mesure et, par conséquent, tout le monde, indépendamment de la langue, peut comprendre et utiliser les données, les analyses et les prévisions. Aujourd'hui, pour améliorer les prévisions météorologiques, il importe au plus haut point de posséder des données hémisphériques et mondiales pour les modèles mathématiques complexes et les ordinateurs à forte vitesse. Grâce à notre participation aux programmes internationaux de recherche et de développement, nous avons immédiatement accès à des connaissances et à des techniques que, du fait des ressources nécessaires, nous ne pourrions jamais espérer obtenir par nous-mêmes. Enfin, par sa participation à l'OMM, le Canada fournit de l'aide technique aux pays en voie de développement et améliore la compréhension entre les nations du monde.

SCOR NEWS

The 25th meeting of the Executive Committee of SCOR was held at the headquarters of the International Council of Scientific Unions, Paris, from 31 August to September 2, 1983.

The meeting was chaired by the interim President of SCOR, Gerold Siedler (FRG) because of the sudden death, on June 28, 1983, of Eric Simpson (South Africa), President of SCOR and a well-know marine geologist.

1. News of Former Working Groups

WG 34, Internal Dynamics of the Ocean. A volume entitled "Eddies in Marine Science" has recently been published. The WG has recommended an observational study of eddy-mean field interaction in the Gulf Stream and its extension and the establishment of a working group on data assimilation in ocean models.

WG 36, Coastal Upwelling Processes. A volume entitled "Physical Aspects of Coastal Upwelling" is in press in Progress in Oceanography.

WG 52, Estimation of Micro-nekton Abundance. A series of papers arising from a 1980 symposium is in press in Biological Oceanography.

WG 60, Mangrove Ecosystems. A monograph on research methods has been submitted for publication by UNESCO.

WG 63, Marine Geochronological Methods. A symposium was held at the Joint Oceanographic Assembly in Halifax in 1982. A final report will be presented to SCOR.

2. Existing Working Groups

WG 42, Pollution of the Baltic. A meeting was held in Tallinn in March, 1983. A study group has been established to coordinate patchiness studies in the Baltic region and to plan for a joint experiment in 1985. A pilot study is underway of the history of pollution in the area as recorded in the sediments. Other studies being conducted include the biological effects of pollution, biogeochemical cycling and mass balances of pollutant substances, and baseline surveys of contaminants in fish and shellfish.

WG 46, River Inputs to Ocean Systems. A meeting was held in December, 1982, in conjunction with an IOS/UNESCO/UNDP workshop on "Estuarine Processes: An application to the Tagus Estuary". The group has recommended further work on river chemistry and processes and the establishment of a new WG on the dynamics of the cycling of materials in estuaries.

WG 51, Evaluation of CTD Data. Work on a "Guide to the Acquisition and Analysis of High Quality CTD Data" has continued.

WG 54, Southern Ocean Ecosystems and Their Living Resources. The Second International BIOMASS Experiment is planned for December 1983 to March 1984 and again in December 1984 to April 1985 in selected areas of the Southern Ocean and will involve 17 research vessels. Specific objectives are the determination of krill abundance and distribution, an assessment of krill production, krill reproductive cycles and the relationship between krill reproductive cycles and fish recruitment. A number of BIOMASS reports, handbooks and newsletters have appeared.

WG 55, Prediction of El Nino. The working group is being disbanded in view of the other closely related work on El Nino under the auspices of the IOC Committee on Climate Change and the Ocean, the IAMAP/IAPSO 1985 symposium on the southern oscillation and El Nino and the IOC/WMO/CPPS study of El Nino.

WG 56, Equatorial Upwelling Process. A meeting on "Vertical motion in the equatorial oceans and its effect on the living resources and the atmosphere" is planned for 1984 in Brest or Paris.

WG 57, Coastal and Estuarine Regimes. The group will be disbanded in 1984 at the SCOR General Meeting.

WG 58, Arctic Ocean Heat Budget. A meeting was held in 1983 in conjunction with a meeting on the Physical and Chemical Oceanography of the Arctic Ocean. A report on the 1982 meeting "Arctic Ocean Modelling" has been published by the Geophysical Institute of the University of Bergen (Rept. No. 57, 1983). The group will be disbanded in 1984.

WG 61, Sedimentation Processes at Continental Margins. A symposium was presented at the JOA in 1982. The group will be disbanded in 1984.

WG 65, Coastal-Offshore Ecosystems Relationships. A meeting was held in Texel, Netherlands in September, 1983. A final report is expected in 1984.

WG 66, Oceanographic Applications of Drifting Buoys. A new Chairman, Dr. G. Cresswell has been appointed, new terms of reference have been approved and the first meeting was held in Boulder in November, 1983.

WG 68, North Atlantic Circulation. A second meeting was held in Paris in October, 1983. One of the main subjects for discussion was the role of WG 68 in the WOCE program of CCCO. A third meeting is planned for 1984.

WG 69, Small-scale Oceanic Turbulence. The first meeting is planned for May, 1984 in Halifax.

WG 70, Remote Measurement of the Oceans from Satellites. The first meeting was held in March, 1983. A report on current capabilities in satellite sensing of the oceans will shortly be ready for publication. The relationship between WG 70 and the Satellite Observing System Working Group of CCCO will be evaluated at the next SCOR General Meeting.

WG 71, Particulate Biogeochemical Processes. A one-day symposium on "Chemical Fluxes through the Water Column" was held at the IUGG Assembly in Hamburg, 1983. The first meeting will be held in 1984.

WG 72, The Ocean as a Source and a Sink for Atmospheric Constituents. An international workshop on air-sea exchange and the flux of trace substances at the air-sea interface is planned for October, 1984 in Mainz, FRG.

WG 73, Ecological Theory in Relation to Biological Oceanography. The proceedings of the 1982 symposium on "Flows of Energy and Materials in Marine Ecosystems: Theory and Practice" will be published in the near future by Plenum Press. An international workshop on community-level ecological theory and its application to biological oceanography is planned for 16-23 March, 1984 at Laval University.

WG 74, General Circulation of the Southern Ocean. The first meeting was held in February, 1983 at the Lamont-Doherty Geological Observatory. A second meeting is planned for May, 1984, probably in Kiel.

WG 75, Oceanic CO2 Monitoring. An initial discussion about terms of reference and approaches was held at the IUGG Assembly in Hamburg. A report is expected in 1984.

3. News of Committees

SCOR/IOC Committee on Climatic Changes and the Ocean (CCCO).
Three "streams" have been identified along which work will be directed:
1. The physical basis for long-term weather forecasting (weeks)
2. Interannual variability (few years)
3. Longer-term climatic trends and climate sensitivity (decades).

The program includes large-scale experiments in support of these streams, a number of exploratory time-series of limited duration in order to explore the benefits of long-term ocean monitoring programs, to develop techniques and to obtain first estimates of variability. Two of the large-scale experiments already formulated are: TOGA (Interannual Variability of the Tropical Oceans and Global Atmosphere); and WOCE (World Ocean Circulation Experiment). A major International TOGA Program Conference is planned for September, 1984.

Joint Panel on Oceanographic Tables and Standards.

A new set of tables of the equation of state for sea water are being produced. A manual for users of the Practical Salinity Scale and the International Equation of State is to be prepared by a "JPOTS Editorial Panel", consisting of representatives from ICES, IAPSO, SCOR and UNESCO. SCOR accepted the proposal by JPOTS that the Fofonoff-Milard algorithms be used as the basis of the new Oceanographic Tables. A meeting of the CO2 sub-group of JPOT was held in Kiel in August, 1983. A final meeting will be held in December, 1984 after which a final report will be issued which can serve as a manual for deriving the carbonate system in seawater. A recommendation from WG 46 that a pH scale suitable for estuarine waters is under consideration by the panel.

Editorial Panel for the Ocean Modelling Newsletter.

Issue No. 51 was published in July, 1983. Support from ONR will continue until 1985.

Editorial Panel on Eddy Dynamics
The volume "Synoptic Eddies in the Ocean", edited by A.S. Monin, V.M. Mamenkovich and M.N. Koshlyakov was published in 1983.

4. Proposals for New Working Groups

Natural Variation in Carbon Dioxide and Carbon Cycles, proposed by CMG. The proposer will define terms of reference and an amended title emphasising the interest in the geological record of variations in CO2 for consideration in 1984.

Ecology of the Deep Ocean Floor (WG 76), proposed by the FRG National Committee, was established. It will be co-sponsored by UNESCO, IABO and CMG. The Chairman is A.L. Rice (UK).

Laboratory Tests Related to Basic Physical Measurements at Sea (WG 77), proposed by the GRD National Committee, arose out of a need to assess the resolution, accuracy and stability of high precision in situ measurement of conductivity, temperature and pressure. K. Striggow (GRD) will be Chairman.

Hydrothermal Processes in the Ocean Crust, proposed by the Canadian National Committee. Other national committees will be asked to review the scope and terms of reference and membership.

Determination of Chlorophyll in Seawater, proposed by UNESCO Division of Marine Sciences. This arose out of the need to improve existing spectrophotometric methods, and to examine new liquid chromatographic techniques which show much promise. The proposal has been referred to IABO for advice on the terms of reference.

5. Intergovernmental Organizations

IOC
SCOR has been involved in the preparation of three major reports to IOC: "A Proposal for a Program on Ocean Science in Relation to Living Resources" (OSLR); "A Proposal on a Program on Ocean Science in Relation to Non-Living Resources" (OSNLR); and "Ocean Science for the Year 2000" (commonly referred to as the FORE report - Future Ocean Research). WG 67 which had prepared OSLR, has recommended a major international experiment to study the effects of varying environmental conditions on the recruitment of fish stocks (IREP). Two workshops were held, one in Roscoff and one at BIO, both in September 1983. OSNLR is being discussed within IOC and a set of international experiments is being formulated. The FORE report, which will shortly be published by IOC, will be used as a basis for updating LEPOR - Long Term and Expanded Program of Oceanic Exploration and Research.

UNESCO
A meeting on "Traditional Management of Coastal Systems" was held in July 1983. Needs for improving interdisciplinary communication between scientists involved in coastal research were discussed.

ACMRR/FAO
A meeting on species composition in neritic fish stocks was held in Costa Rica in April, 1983. The technical phase of the FAO World Conference on Fisheries Development and Management is being implemented.

CCAMLR
The Commission's Scientific Committee met in September, 1983 to review priorities for scientific research.

S.E. CALVERT
for CNC/SCOR

Le Nouveau Superordinateur D'Environnement Canada

Voici quelques renesignements sur le nouvel ordinateur ultra rapide d'Environnement Canada, qui vient d'être installé au Centre météorologique canadien, à Dorval (Québec).

- Le nouvel ordinateur est un Cray 1S/1300 comprenant les unités de bandes magnétiques et de disques.
- C'est un ordinateur vectoriel ayant une mémoire de 10 millions d'octets et une vitesse de calcul supérieure à 50 millions d'opérations par seconde.
- Il fait partie des ordinateurs les plus rapides du monde, ayant une puissance équivalente à celle d'un million d'ordinateurs individuels.
- C'est le premier superordinateur installé au Canada, ayant la capacité de traiter simultanément 63 programmes.

Fabicant du super-ordinateur

L'ordinateur est produit par la société Cray Research Inc., à Minneapolis (É.U.). L'1S/1300 d'Environnement Canada est le 56e ordinateur de ce type dans le monde.

Emplacement

L'ordinateur est situé au Centre météorologique canadien, à Dorval et remplace le CYBER 176.

Calendrier

- Automne 1983 : installation du superordinateur.
- Début 1984 : entrée en service. 1er février 1984 : inauguration officielle par l'Honorable Charles Caccia, Ministre de l'Environnement du Canada.
- 1984-1988 : perfectionnement des modèles machine (voir dernière partie du texte).

Coût

Le nouvel ordinateur coûte environ 32 millions de dollars. Le programme de financement, réparti sur plus de six ans et demi, comprend le remplacement du Cray 1S/1300 par un ordinateur encore plus puissant à la fin de 1986. C'est là un coût de revient modéré comparativement au degré de technologie en jeu.

Utilisations multiples du superordinateur

Il permettra tout d'abord d'offrir de meilleurs services météorlogiques dans les deux langues officielles, les prévisions étant plus sûres et leur période de validité plus longue. Il est bon de préciser qu'outre les utilisations météorologiques, l'ordinateur servira dans de nombreux autres domaines. En particulier:

1. Il permettra d'établir des aperçus saisonniers et de meilleures évaluations des scénarios des changements climatiques, par exemple, les effets sur le climat de l'augmentation du gaz carbonique dans l'atmosphère ou encore les conséquences d'explosions volcaniques;
2. On l'utilisera pour la recherche dans le domaine des précipitations acides (source, transport et transformations);
3. Les universités ainsi que d'autres organismes de recherche y auront accès, ce qui nous permettra d'améliorer nos connaissances sur les mécanismes atmosphériques et océaniques.

Un nombre croissant de Canadiens pourront tirer parti des résultats obtenus à l'aide du superordinateur. La coopération internationale jouera un plus grand rôle dans les domaines d'utilisation. Par exemple, les données météorologiques utilisées proviendront de toutes les régions du globe et non plus simplement de l'hémisphère Nord, ainsi nos liens seront-ils plus étroits avec le réseau d'observation de l'Organisation météorologique mondiale.

Calendrier de perfectionnement des modèles

Printemps 1984: transfert sur le CRAY des modèles utilisés sur le CYBER 176.

1985-1986

- Introduction de modèles plus perfectionnées permettant une meilleure prévision des vents à grande échelle.
- Prévisions pour le 6e jour.
- Réduction des erreurs dans les prévisions de la température pour les 2e, 3e, 4e, 5e jours.
- Amélioration de l'exactitude des prévisions de phénomènes violents sur une période de 24 à 48 heures.
- Contribution aux modèles régionaux permettant un traitement plus détaillé des 48 premières heures.

1986-1987

- Prévision automatique de tous les éléments météorologiques pour de plus longues, périodes, meilleure exactitude des prévisions des hauteurs de précipitations et des prévisions du vent.
- Grande augmentation du nombre de prévisions pour un lieu précis.

1987-1988

- Nouveau modèle terrestre permettant d'étendre la période de validité des prévisions à plus de sept jours pour tout le Canada.

Inauguration of New Supercomputer at the Canadian Meteorological Centre in Dorval, Quebec

The Minister of the Environment, the Hon. Charles Caccia officially inaugurated the new "supercomputer" of the Atmospheric Environment Service on 1 February 1984, in the presence of over a hundred invited guests from the Canadian scientific and adminstrative community. Also present were the members of the WMO Bureau, a high-level WMO organization including the President and Secretary-General of WMO, which met in Canada at the time. The following are some highlights of the new supercomputer, which according to the President of WMO, Dr. R.L. Kintanar (Phillipines) is "among the most powerful computers in use in meteorolgy today".

1. The new machine, a Cray 1S/1300, is a vector computer with 10 million bytes of memory and calculates at a rate of more than 50 million operations per second. This type is the world's fastest computer and has a computing power equivalent to a million personal computers. It is the first supercomputer in Canada, with the capability of running 63 programs concurrently.

2. The machine is made by Cray Research Inc., Minneapolis, U.S.A. Environment Canada's 1S/1300 is the 56th of its type in the world and is located at the Canadian Meterological Centre, replacing the CYBER 176 computer now in Dorval.

3. The new computer program will cost around $32 million, spread over 6 1/2 years including plans to replace the Cray 1S/1300 by an even faster computer by late 1986. For the degree of new technology involved costs have been kept to a reasonable level.

4. It will offer improved weather services in both offficial languages mainly by way of longer range and more accurate forecasts. But it must be stressed that these weather uses of the computer are by no means the only ones. Several other uses are also important:

   - It will in the future produce seasonal outlooks and improved evaluations of scenarios for climate change, e.g. the effects of atmospheric CO_2 on climate or the consequences of volcanic explosions.

   - Research into acid rain, its sources, transport and transformation.

   - Shared use of facilities with universities and other research organizations, leading to increased knowledge of atmospheric and oceanic processes.

5. An evern increasing number of Canadians will derive benefits from the supercomputer and there will be increasing reliance on international cooperation. For example, input of weather data will cover the entire globe, not just the northern hemisphere and there will be more utilization of the World Meteorological Organization's observation network.

6. Model upgrading timetable

   Spring 1984 Model uses on old CYBER 176 transferred to CRAY.

   1985-86

   - Introduction of more sophisticated model will allow improved forecasting of large scale wind patterns.
   - Extension of forecast period to day 6 forecasts.
   - Fewer 2-5 day temperature forecasting errors.
   - Improved accuracy in severe weather forecasts over 24-48 hour period.
   - Input into regional model will provide more detailed treatment of first 48 hours.

   1986-87

   - Automated prediction of all weather elements for longer time periods, greater accuracy in precipitation amount predictions and improved wind forecasts.
   - A big increase in the number of specific locality forecasts.

   1987-88

   - New global model will extend range of forecasts beyond seven days for all of Canada.

PRIZES AND AWARDS COMMITTEE

The CMOS Prizes and Awards Committee came into being as a permanent committee in 1981, following a review of the CMOS prizes begun in 1980. The terms of reference of the committee are simple: to recommend to Council each year a list of recipients for the Societies prizes in time for presentations to be made at the Annual Congress, and to recommend changes to the CMOS Awards system as appropriate.

The suite of CMOS prizes and awards includes the President's Prize, the Dr. Andrew Thomson Prize in Applied Meteorology, the Rube Hornstein Prize in Operational Meteorology, the Graduate Student Prize and the recently added Prize in Applied Oceanography. In addition CMOS may award Citations. Prize winners are presented with a framed certificate at the Annual Congress and a book prize.

Most of the Committee's work involves calling for nominations for the various Prizes and then choosing a list of recommended recipients from the nominations received. Since members of the committee are based in different parts of the country the meeting to choose recipients takes the form of a conference call, held in late January or early February each year. Despite the fact that most of us have little experience in this way of meeting, it seems to work well. We then prepare the certificates and finally send out the books of their choice to the prize winners.

There are six members on the Committee, each serving a three year term, with two new members elected each year. For this year the membership consists of:

David Huntley, Chairman
- Associate Professor in Physical Oceanography, at Dalhousie University, Halifax, Nova Scotia.

Stephen Calvert
- Professor in Chemical Oceanography and the head of the Department of Oceanography, University of British Columbia, Victoria, B.C.

Paul LeBlond
- Professor in Physical Oceanography at the Univ. of British Columbia, Victoria, B.C.

Philip Merilees
- Chief Scientist with the Canadian Climate Centre in Downsview, Ontario

Desmond O'Neill
- Regional Director of the Atlantic Region, A.E.S. Bedford, N.S.

Gary Wells
- Chief of the Pacific Weather Centre in Vancouver, B.C.

The balance of meteorology and oceanography within CMOS is reflected in the composition of the committee, and this balance is also becoming evident in the range of prizes offered. The new Prize in Applied Oceanography will soon, we hope, be joined by a second Prize specifically for oceanographers.

This is a good opportunity to thank all those who nominates candidates for the Prizes each year. It is through the efforts of nominators that we are able to maintain the high reputation of the CMOS Prizes and Awards.

CMOS/CGU CONGRESS '84
Dalhousie University, Halifax, Nova Scotia
May 29 - June 1, 1984

Venue

Halifax - city by the sea featuring Historic Properties, Maritime Museum, Bluenose II and the Citadel - is full of attractions for visitors. The east coast lobster and fish chowder are unforgettable. Come and join your friends and colleagues, enjoy Nova Scotian hospitality and help make this the best Congress ever.

Scientific Program

The response to the Call for Papers has been phenomenal, with over 220 papers received at the time of writing. The themes of the Congress will be "The Marine Environment: Atmosphere, Ocean and Lithosphere". Except for the opening plenary session on the morning of Tuesday, May 29, there will generally be five simultaneous sessions, including theme sessions of interest to members of both CMOS and CGU and special sessions on topics of particular interest. The session titles and times are listed later in this announcement. Submitted papers will be 20 minutes in length, and invited papers 35 minutes.

Exhibits

Throughout the Congress, there will be a display of commercial exhibits in the fields of meteorology, oceanography and geophysics. Interested exhibitors should contact the Exhibits Convenor, Dr. Bert Bennett (see address below), as soon as possible to reserve space.

BIO OPEN HOUSE

A special feature of the Congress will be a visit to the Bedford Institute of Oceanography Open House on the afternoon of Wednesday, May 30. Bus transportation will be provided.

CMOS Committee Meetings

Various CMOS Committees and CMOS National Council will meet on Monday, May 28. The CMOS Annual General Meeting is planned for the evening of Tuesday, May 29.

Facilities

The Congress will be held on the campus of Dalhousie University, which is a short walk from downtown and is near several major hotels. The opening session will be in the Rebecca Cohn Auditorium of the Dalhousie Arts Centre, and subsequent sessions and exhibits will be in the Arts and Administration Building and the Life Sciences Centre.

Accommodation

Two hundred and fifty rooms on campus have been reserved at the Shirreff Hall residence. These rooms are very comfortable. They include parking and breakfast and are within easy walking distance of the Congress. Reservations must be made before May 1, 1984 using the accompanying form.

For those who prefer hotel type accommodations, special rates have been obtained at the following hotels:

The Lord Nelson 1515 South Park St. P.O. Box 700 Halifax, Nova Scotia B3J 2T3	The Holiday Inn, Halifax Centre 1980 Robie Street Halifax, Nova Scotia B3H 3G5
(902) 423-6331	(902) 423-1161

Single	Double	Single	Double
$52.00	$59.00	$56.00	$63.00

Room reservations must be made with the hotel directly. To qualify for special rates, please specify that you will be attending the CMOS/CGU Congress and reserve before April 28, 1984.

Transportation

Halifax is served by air, rail and highway links to most major North American cities. A bus service (fare approximately $6.00) operates from the airport to most downtown hotels, but not to the Halifax Holiday Inn. Taxi fare from the airport to downtown are approximately $21.00. Present information regarding westbound flights on Friday, June 1st, suggests tentative CP-Eastern Provincial at 17:00 and Air Canada at 17:05. This scheduling has not yet been confirmed.

Social

During the evening of Monday, May 29, a "beer and nuts" reception, where participants may register for the conference, will be held in the Green Room of the Student Union Building (SUB) on University Avenue.

The annual banquet shall be at the Shore Club during the evening of Thursday, May 31. This Club, located 30 miles southwest of Halifax in Hubbards, Nova Scotia, specializes in lobster and steak suppers. This choice will be made at the registration desk. The Club has a pleasant reception area, overlooking the ocean, with fireplaces and a cash bar. Transportation to Hubbards and back to Halifax will be provided by chartered bus. If the weather is good and enough people are interested, one or two buses could leave early for a tour of Peggy's Cove and other coastal communities on the way to dinner.

The costs of the reception refreshments, banquet dinner, dinner wine and bus shall be covered in the conference registration fee (except for students).

Suggestions and guidance will be available for those wishing to visit historic, cultural or natural attractions in the city or province; however, no pre-planned group tours or visits are presently being considered.

Registration

Pre-registration will be accepted until April 15 1984, after which a $15.00 late registration fee will be charged. The registration fees for 1984 are $80.00 for members of CMOS, CGU (and affiliates) (Members of the AGU and European Geophysical Society may register at member rates) $100.00 for non-members, $60.00 for retired members and $10.00 for students. Except for students, banquet and reception tickets are included in the basic registration fee. Additional tickets will be available at the registration desk.

LOCAL ARRANGEMENTS COMMITTEE

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PROGRAMME
18TH ANNUAL CONGRESS OF CMOS
and
11TH ANNUAL MEETING OF CGU

Tuesday, May 29, 1984

0900		Plenary Session: The Marine Environment - G.T. Needler
1400	A	Theme Session: Geophysical Fluid Dynamics - C. Quon
1400	B	Sea Level, Tides, and Storm Surges - S. Grant
1400	C	Operational Meteorology - R. Nelis
1400	D	Marine Chemistry - E.P. Jones
1400	E	Lithospheric Stress - J. Adams
Evening		CMOS Annual General Meeting

Wednesday, May 30, 1984

0900	A	Geophysical Fluid Dynamics (Continued) - C. Quon
0900	B	Scientific Services to Offshore Industry - A.D.J. O'Neil
0900	C	Agriculture and Forest Meteorology - R. Street
0900	D	Paleoclimate - R. Fillon
0900	E	Lithospheric Stress (Continued) - J. Adams
1050	C	Air Pollution Meteorology - R. Shaw
1400		Tour: Bedford Institute of Oceanography Open House
Evening		CGU Banquet

Thursday, May 31, 1984

0900	A	Numerical Weather Prediction - I. Rutherford
0900	B	Theme Session: Coastal Oceanography 1: Circulation Driven by Winds and Tides - P.C. Smith and A.J. Bowen
0900	C	Theme Session: Boundary-Layer Processes - P.A. Taylor
0900	D	Remote Sensing and Meteorological Instrumentation - B. Topliss
0900	E	Theme Session: Arctic Expeditions, CESAR, LOREX and FRAM - J.R. Weber
1050	A	Climate Change and Variation - G. Boer
1400	A	Large-Scale Dynamic Meteorology
1400	B	Coastal Oceanography 2: Inlets and Fjords
1400	C	Synoptic Meteorology and Climate - C.F. MacNeil
1400	D	Continental Margin Studies - A.C. Grant
1400	E	Arctic Expeditions, CESAR, LOREX and FRAM (Continued) - J.R. Weber
1550	A	Cloud Physics - E. Lozowski
1550	B	Coastal Oceanography 3: Strait Talk
1550	D	Deep Crustal Structure and Seismology - G. Quinlan
Evening		CMOS Banquet

Friday, June 1, 1984

0900	A	Sea Ice and Icebergs - J. Eley
0900	B	Coastal Oceanography 4: Stratification and Mixing
0900	C	Meso-Scale Meteorology - G. Isaac
0900	D	Marine Sediment Geochemistry and Paleooceanography - S. Calvert
0900	E	Theory, Modeling, General Geophysics, and Navigation - M.J. Keen
1050	B	Deep-Sea Oceanography - R.M. Hendry
1330	B	Deep-Sea Oceanography (Continued) - R.M. Hendry
1330	C	Panel Discussion: Nuclear Winter Scenario - P.H. LeBlond
1330	D	Geophysical Heat Flow - K.E. Louden
1330	E	Magnetics - P.A. Camfield
1610		Sessions end

Invited Speakers

E.A. Boyle, Massachusetts Institute of Technology
K.H. Brink, Woods Hole Oceanographic Institution
R. Peltier, University of Toronto
W.F. Rudiman, Lamont Geophysical Observatory
I. Rutherford, Atmospheric Environment Service
D.W. Simpson, Lamont Geophysical Observatory

CONGRESS REGISTRATION FORM

Name: _____

Address: _____

City: _____ Province: _____ Code: _____

Telephone: _____ Affiliation (please check): CMOS _____

CGU _____

Registration Fee (please circle below): DATE _____

Member	$ 80.00
Retired Member	$ 60.00
Non-Member	$100.00
Student	$ 10.00
Late Registration Fee	$ 15.00

Please return your completed registration form to:

CMOS/CGU Congress
c/o Atmospheric Environment Service
1496 Bedford Highway
Bedford, Nova Scotia B4A 1E5

Please make cheques payable to CMOS/CGU.

ACCOMMODATION RESERVATION FORM
CMOS/CGU CONGRESS '84
May 29 - June 1, 1984

DALHOUSIE UNIVERSITY, Halifax, Nova Scotia

Name: _____

Address: _____

Arrival Date: _____ Departure Date: _____

Shirreff Hall Accommodation (please indicate 1st and 2nd choices)

- Single room (with sink) $25 per night
- Single room (without sink) $22 per night
- Shared room (with sink) $36 per night
- Shared room (without sink) $30 per night

(Accommodation rates include linens, towels, parking and breakfast)

Please complete any of the following that apply to your reservation:

I will be accompanied by: _____

I am interested in child care facilities for my children whose ages are: _____

I have requested a shared room in Shirreff Hall and I would be willing to share with: _____

I will arrive by car and would like to receive complimentary parking YES/NO

I would like to purchase a ($10 per wk. or $2.50/Day) pass to Dalplex YES/NO

In the space below please indicate any disabilities or special requirements:

_____

_____

A deposit equal to one night's accommodation must accompany this reservation. The deposit for Shirreff Hall is nonrefundable. All bank drafts, money orders and cheques should be payable in Canadian funds and made payable to the Conference Centre.

Amount of deposit: _____ Date: _____ Signature: _____

Please return to: Reservations/Accommodations
Conference Centre
Room 210, Student Union Bldg.
Dalhousie University
Halifax, Nova Scotia B3H 4J2

Note: Reservations should be made by May 1, 1984.

SEMINAIRE STANSTEAD

Le quinzième "Séminaire Stanstead" organisé par le Département de météorologie de l'Université McGill aura lieu du 9 au 13 juillet 1984 à l'Université Bishop's, à Lennoxville, Québec. Le thème portera sur les écoulements atmosphériques à grande échelle, avec un accent particulier sur les phénomènes de téléconnection. Le programme inclura des présentations par J.M. Wallace, University of Washington; G. Branstator, National Center for Atmospheric Research; E. Harrison, Massachusetts Institute of Technology et G.J. Boer du Service de l'environnement atmosphérique canadien. Pour s'inscrire ou pour plus de renseignements s'adresser à: Jacques Derome, Département de météorologie, University McGill, 805 ouest, rue Sherbrooke, Montréal (Québec), Canada H3A 2K6 (Tel. (514) 392-4462).

STANSTEAD SEMINAR

The 15th Stanstead Seminar organized by the Department of Meteorology, McGill University, will be held at Bishop's University, Lennoxville, Québec, Canada, July 9-13, 1984. Its theme is "Large-scale atmospheric motions, with special emphasis on teleconnection patterns." The speakers will include Prof. J.M. Wallace, University of Washington; Dr. G. Branstator, National Center for Atmospheric Research; Dr. E. Harrison, Massachusetts Institute of Technology and Dr. G.J. Roer, Atmospheric Environment Service of Canada. For information and registration contact: Prof. Jacques Derome, Department of Meteorology, McGill University, 805 Sherbrooke St. W., Montréal, Québec, Canada H3A 2K6 (Tel. (514) 392-4462).

SCIENTIFIC MEETINGS IN EUROPE

Meteorologists can have more than their fill this summer and fall of international scientific meetings in Europe under IAMAP, WMO or AMS auspices. A short list follows:

Noctilucent Clouds: 17-20 August Tallinn, Estonia, Soviet Union

9th International Conference on Cloud Physics: 21-27 August, Tallinn, Estonia, Soviet Union; for both contact:

Professor O.A. Avaste, Institute of Astrophysics and Atmospheric Physics, Tartu, Toravere, 202444, Estonia U.S.S.R.

9th International Conference on Radiation: 21-29 August, Perugia, Italy; contact:

Professor J. LeNoble, Université Lille I, 59655, Villeneuve, D'ascq. France

11th International Conference on Atmospheric Aerosols, Condensation and Ice Nuclei: 2-7 September, Budapest; contact:

Dr. E. Mészaros, Institute for Atmospheric Physics, 1675 Budapest, P.O.B. 39, Hungary

NOWCASTING: 3-7 September, Norrkoping, Sweden; contact:

Dr. S. Bodin, Swedish Meteorological and Hydrological Institute, Box 923, 601 19 Norrkoping, Sweden

Ozone Symposium: 3-7 September, Kassandra Halkidiki, Greece; contact:

Dr. C.D. Walshaw, Clarendon Laboratory, Oxford, OX1 3PU, England

22 Radar Meteorology Conference: 10-13 September, Zurich; contact:

Dr. A. Waldvogel, Atmospharenphysik, ETH, Hongerberg HPP, CH-8093, Zurich, Switzerland

NINTH CANADIAN SYMPOSIUM ON REMOTE SENSING

Memorial University of Newfoundland
St. John's, Newfoundland, Canada
August 13-17, 1984
Sponsor: The Canadian Remote Sensing Society

Remote Sensing in the Development and Management of Frontier Regions
Call for Papers

The Ninth Canadian Symposium on Remote Sensing will be held in St. John's, Newfoundland, from August 13-17, 1984. This Symposium is the largest of its kind in Canada and attracts members of the Scientific community from around the world.

The general theme will be remote sensing in the development and management of frontier areas, with emphasis on the oceans, the north, the forests and other wilderness areas. The Symposium will consist of plenary sessions with invited and contributed papers, poster sessions, and technical sessions for presentations on advances in instrumentation and systems.

The technical and scientific program committee invites authors to submit proposals for papers, posters or technical session contributions. These proposals should be in the form of a 600-word abstract, and should be sent by February 29, 1984, to the following address:

Dr. Denes Bajzak
Faculty of Engineering and Applied Science
Memorial University of Newfoundland
St. John's, Newfoundland
Canada, A1B 3X5
Telex No.: 016 4101

Following review of the abstracts, authors will be notified. Instruction for preparation of the final manuscripts for publication will be mailed in April 1984, together with advance program information and registration forms.

For more information regarding the Symposium, please contact the Chairmen of the Scientific and Technical Committee, or of the Organizing Committee in St. John's, care of the above address.

Co-Chairmen of the Scientific and Technical Committee:

Dr. Denes Bajzak
Faculty of Engineering and Applied Science
Memorial University of Newfoundland
St. John's, Newfoundland
Canada, A1B 3X5
Telex No.: 016-4101

Dr. Susan M. Till
Canada Centre for Remote Sensing
2464 Sheffield Road
Ottawa, Ontario K1A 0Y7
Telex No.: 053-3777

NEUVIEME SYMPOSIUM CANADIEN SUR LA TELEDETECTION

Université Mémoriale de Terre-Neuve
St. John's (Terre-Neuve) Canada
13-17 août 1984
Parrainé par la Société canadienne
de télédétection

La télédétection dans le développement et la gestion des régions frontières

Appel à communications

Le neuvième Symposium canadien sur la télédétection aura lieu à St. John's (Terre-Neuve) du 13 au 17 août 1984. Ce symposium est le plus grand de ce genre au Canada et attire des membres de la communauté scientifique du monde entier.

Le thème général sera la télédétection dans le développement et la gestion des régions frontières, avec l'accent sur les océans, le nord, les forêts, et autres régions sauvages. Le symposium comprendra des sessions plénières avec des communications invitées et contribuées, des sessions d'affichage, et des sessions techniques consacrées aux progrès récents dans le domaine de l'instrumentation et des systèmes.

Le Comité du programme technique et scientifique invite les auteurs à soumettre des propositions pour des articles, des affiches ou des contributions aux sessions techniques. Ces propositions devraient prendre la forme d'un résumé de 600 mots et être envoyées, avant le 29 février 1984, à l'adresse suivante:

Dr. Denes Bajzak
Faculté de génie et des sciences appliquées
Université Mémoriale de Terre-Neuve
St. John's (Terre-Neuve)
Canada A1B 3X5
Telex: 016-4101

Suivant la revue des résumés, les auteurs des communications proposées seront avertis. Les instructions pour la préparation des textes finals pour publication, ainsi que des renseignements préliminaires sur le programme et des formulaires d'inscription, seront envoyés au mois d'avril 1984.

Pour de plus amples renseignements, veuillez communiquer avec les Présidents du Comité scientifique et technique, ou du Comité responsable de l'organisation à St. Jonh's, au soin de l'adresse ci-dessus.

Co-présidents du Comité scientifique et technique:

Dr. Denes Bajzak
Faculté de génie et des sciences appliquées
Université Mémoriale de Terre-Neuve
St. John's (Terre-Neuve)
Canada A1B 3X5
Telex: 016-4101

Dr. Susan Till
Centre canadien de télédétection
2464, rue Sheffield
Ottawa (Ontario)
Canada K1A 0Y7
Telex: 053-3777

INTERNATIONAL CONFERENCE ON ATMOSPHERIC SCIENCES AND APPLICATIONS TO AIR QUALITY, MAY 20-24, 1985, SEOUL, KOREA

FIRST ANNOUNCEMENT & CALL FOR PAPERS

This conference sponsored by the Korean Federation of Science and Technology Societies (KOFST) will take place during the time of the International Science Exposition, "Tsukuba Expo '85", which will be held near Tokyo, Japan. Co-operating organizations will include the Korea Office of the Environment, Korean Meteorological Society, Air Pollution Control Association (Pittsburgh), American Meteorological Society and Canadian Meteorological and Oceanographic Society.

The programme will be arranged by a committee tentatively consisting of Dr. M. Benarie, Dr. Y.S. Chung, Prof. H.W. Georgii, Mr. G.S. Hart, Prof. Ju. A. Izrael, Prof. T. Kawamura, Dr. K.-S. Min, Dr. D.J. Moore, Prof. R.E. Munn, Dr. B. Padmanabhamurty, Dr. K. Takeuchi, Dr. D. Yap, Dr. Z.P. Zhao, and Mr. R. Zhu.

One of the aims of this Conference is to promote atmospheric sciences and clean air in the regions of the Pacific rim and to seek ways for an eventual reduction in background levels of global air pollutants. Proposed sessions of the Conference include: 1) air chemistry, 2) applied and urban climatology, 3) applied meteorology, 4) air quality meteorology, 5) monitoring techniques, 6) local air quality, 7) regional air quality, 8) global air quality, 9) transport and transformation, 10) acid rain, 11) air quality modelling, 12) air quality prediction, 13) abatement techniques, 14) environmental impact assessment, and 15) environmental decision and policy. In addition to the technical programme, an exhibition of appropriate equipment, instrumention and services will take place.

Contributions are invited on any of the above topics. The official language to be used at the meeting will be English. Paper presentations by young scientists are encouraged. Informative abstracts of about one page (200-400 words) should be submitted by August 1, 1984, and authors should indicate the subject area session in which the proposed paper fits best. A Conference preprint volume is planned, and complete camera-ready texts of 4-8 pages will be required for accepted papers by December 1, 1984. Abstracts should be sent to:

Y.S. Chung (tel.: (416) 667-4980), Atmospheric Environment Service (AQRB), 4905 Dufferin Street, Downsview, Ontario M3H 5T4, Canada.

Individuals and exhibitors wishing to obtain further information please contact the above.

3RD ANNUAL
CANADIAN OCEAN
TECHNOLOGY
CONGRESS

Whith the continued growth of the commercial diving and offshore technology as a major industrial and scientific endeavor of Canadian enterprise, UNDERWATER CANADA '84 is very pleased to announce that the 3rd Annual CANADIAN OCEAN TECHNOLOGY CONGRESS has been scheduled for March 22nd-23rd, 1984, in Toronto.

The 3rd Annual Canadian Ocean Technology Congress will be your best opportunity for a "hands-on" experience of a lifetime!

COTC'84 provides the multi-disciplined offshore industry, government agencies, and support services industry, the first opportunity to collectively meet and discuss Canada's offshore diving industry. The format of COTC '84 provides for knowledgeable professionals to address the

topics, with the balance of the time for active audience/panel dialogue. You cannot help but leave COTC '84 knowing in which direction Canada's offshore diving industry is heading.

For the first time in 1984, the Canadian Ocean Technology Congress will be jointly sponsored by UNDERWATER CANADA and the Canadian Association of Diving Contractors. Program and advisory support is provided by the Defense and Civil Institute of Environmental Medicine.

C.O.T.C. III will offer you one of the finest opportunities ever for upgrading your knowledge and understanding of the off-shore and inland diving industries. No matter what particular segment of this diverse industry you or your company are involved in, it will benefit you to attend. In addition to the regular Congress events, a number of important industry meetings are also being scheduled by C.O.G.L.A., by C.A.D.C., by the Canadian Standards Association, and by many others.
Make your plans now to be Toronto on MARCH 22nd and 23rd for this important event.

USE ATTACHED REGISTRATION FORM AND ORDER YOUR TICKETS TODAY!

CANADIAN OCEAN TECHNOLOGY CONGRESS
MARCH 22 - 23, 1984
TORONTO, CANADA

TICKET ORDER FORM

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1. C.O.T.C. "ALL EVENTS" PASS:
Admission to all C.O.T.C. events including Thursday Symposiums; C.O.T.C. Banquet; Friday Symposiums & Luncheon; and all Displays. Also includes copy of Symposium proceedings.

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A. THURSDAY SYMPOSIUMS ONLY
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Thursday evening, March 22nd 7:30 p.m.

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C. Friday Symposiums & Lunch
March 23rd

____ # Tickets @ $45.00 = _____

D. C.O.T.C. III Proceedings

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FOR INFORMATION ON HOTELS SEE REVERSE' MAILING DETAILS ON BACK.

3. HOTEL ACCOMMODATION:
We will be pleased to book your hotel room(s) to ensure your accommodation at the hotel. PLEASE SPECIFY: ☐ ONE DOUBLE BED
TWO DOUBLE BEDS ☐ PLEASE BOOK ROOM FOR:

$65.00 Singie or Double.

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- ☐ Wednesday, March 21st
- ☐ Thursday, March 22nd
- ☐ Friday, March 23rd
- ☐ Saturday, March 24th

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MAIL TO:

Underwater Canada '84
Canadian Ocean Technology Congress
1220 Sheppard Ave. East
Willowdale, Ontario, Canada
M2K 2X1

NOTE: (1) REFUND POLICY: Full refund for cancellations received before March 1st. 50% refund for cancellations received between March 1st and March 21st. NO REFUNDS after March 21st.

(2) TICKETS: Tickets ordered up to March 1st will be mailed directly to the registrants address shown on this form. Ticket orders received after March 1st must be picked up at the Show Registration Desk.

PROCEEDINGS OF THE FIVE PANEL SESSIONS PLUS SUMMARIES OF THE KEYNOTE ADDRESSES AND SPECIAL PRESENTATIONS WILL BE PUBLISHED AND AVAILABLE AS PART OF THE C.O.T.C. TICKET PACKAGE.

For More Information, Contact:
(416) 495 - 4245
TELEX: 06 - 986157 OSAC TOR

SYMPOSIUM SUR LA CHIMIE DE LA NEIGE ET DE LA GLACE ET L'ATMOSPHERE

Université Trent
Peterborough, Canada
19-24 août 1984

ORGANISATION ET ORGANISMES PROMOTEURS

Le symposium est organisé par le Sous-comité sur les glaciers du Conseil national de recherches du Canada et parrainé par la Société royale du Canada, l'Université Trent, le ministère fédéral de l'Energie, des Mines et des Ressources, le ministère de l'Environnement (ME), et la Commission sur la chimie atmosphérique et la pollution globale.

COMITE ORGANISATEUR

R.M. Koerner	Président Energie, Mines et Ressources
D.A. Fisher	Energie, Mines et Ressources
C.S.L. Ommaney	Institut national de recherche en hydrologie
W.P. Adams	Université Trent
B. Goodison	Service de l'environnement atmosphérique
D. Whelpdale	Service de l'environnement atmosphérique
L. Barrie	Service de l'environnement atmosphérique
W.H. Mathews, S.R.C.	Université de Colombie-Britannique

THEMES

Le thème principal du symposium est la mécanique du transport et l'incorporation des aérosols dans la neige et les effets marquants subséquents sur les nappes de glace. Par conséquent, les principaux sujets à débattre sont:

1. l'analyse de particules et de constituants chimiques dans les nappes de glace;
2. les modèles de transport, la chimie de l'air et les changements climatiques;
3. les méthodes d'échantillonnage et d'analyse de l'atmosphère et des carottes de glace;
4. les influences volcaniques et cosmiques sur la chimie de l'atmosphère et de la glace; et
5. les processus d'incorporation de constituants atmosphériques dans les nappes de glace et la neige.

La portée du symposium ne se limite PAS aux glaciers.

MEMOIRES PRESENTES

La date limite pour la présentation des titres et de résumés détaillés des mémoires a été reportée au 15 mars. Les titres et les résumés doivent être envoyés à:

M. W.P. Adams, Ph.D.
Doyen, Faculté des sciences
Université Trent
Peterborough (Ontario)
K9J 7B8, Canada

Les mémoires présentés à l'occasion du symposium ne seront imprimés que s'ils n'ont pas parus dans d'autres publications. Les auteurs doivent expédier à M. W.P. Adams leurs manuscrits prêts à la reproduction au plus tard le 1er juillet 1984. Les textes doivent être dactylographiés à double interligne et ne pas dépasser 6 000 mots. Les instructions pour la préparation des manuscrits seront jointes aux avis d'acceptation des mémoires.

LOGEMENT

Les participants pourront se loger au Collège Champlain ou au Collège Lady Eaton de l'Université Trent. Ces collèges sont situés l'un à côté de l'autre sur la rivière Otonabee, à 5 kilomètres au nord de Peterborough (Ontario). Le tarif, fixé à 55 $ CAN par jour, comprendra le logement, trois repas et le café, et donnera droit aux installations sportives et au stationnement. On exige un dépôt de 50 $ CAN par personne (non remboursable) pour la réservation.

DEPLACEMENT

L'Université Trent est directement desservi par le service de limousine et d'autobus Trentway/Wagar à partir de l'aéroport de Toronto (environ 35 $ CAN aller retour). La limousine peut être réservée à l'avance. La ville de Peterborough est également desservie par des autobus et des aéronefs légers (Air Atonabee à destinations d'Ottawa, de Toronto et de Montréal).

INSCRIPTION

Des frais d'inscription de 50 $ CAN (20 $ pour les étudiants) couvriront les coûts généraux du symposium et le coût de la publication des comptes rendus. En raison des arrangements financiers que nous avons conclus, les frais d'inscription pour les participants hors campus seront de 100 $ CAN.

Les PAIEMENTS doivent être faits à l'ordre de:

LA SOCIETE ROYALE DU CANADA

Par mandat bancaire ou par mandat-poste international en fonds canadiens et être envoyés avec la formule d'inscription AU PLUS TARD LE 1er JUIN 1984 à:

M. W.P. Adams, Ph.D
Doyen, Faculté des sciences
Université Trent
Peterborough (Ontario)
K9J 7B8, Canada

Les inscriptions faites en retard seront assujetties à une somme additionnelle de 10 $ CAN.

CONFERENCE INTERNATIONALE SUR LES SCIENCES ATMOSPHERIQUES ET LEUR APPLICATION A LA QUALITE DE L'AIR, DU 20 AU 24 MAI 1985, A SEOUL, COREE

PREMIER AVIS ET APPEL DE COMMUNICATIONS

Cette conférence parrainée par la Fédération coréenne des sociétés de sciences et de technologie aura lieu pendant l'exposition scientifique internationale "Expo 85 de Tsukuba", qui se tiendra près de Tokyo, au Japon. Parmi les organismes participants, citons le bureau coréen de l'Environnement, la Société météorologique de Corée, l'Association de lutte contre la pollution atmosphérique (Pittsburgh), la Société météorologique américaine et la Société canadienne de météorologie et d'océanographie.

Le programme sera organisé par un comité qui comprendra MM. M. Benarie, Y.S. Chung, H.W. Georgii, G.S. Hart, Ju A. Izrael, T. Kawamura, K.S. Min, D.J. Moore, R.E. Munn, B. Padmanabhamurty, K. Takeuchi, D. Yap, Z.P. Zhao et R. Zhu.

Un des objectifs de cette conférence consiste à encourager le développement des sciences

atmosphériques et la présence d'air pur dans les régions de la bordure du Pacifique et de rechercher les moyens de réduire ultérieurement les niveaux de fond des polluants atmosphériques mondiaux. Les séances proposées pour la conférence comprennent: 1) chimie de l'air 2) climatologie appliquée et urbaine 3) météorologie appliquée 4) météorologie de la qualité de l'air 5) techniques de surveillance 6) qualité de l'air local 7) qualité de l'air régional 8) qualité de l'air mondial 9) transport et transformation 10) pluie acide 11) modélisation pour l'étude de la qualité de l'air 12) prévision de la qualité de l'air 13) techniques de réduction de la pollution 14) prospective d'environnement 15) décisions et lignes de conduite en matière d'environnement. Outre le programme technique, il y aura une exposition appropriée de matériel, d'instruments et de services.

Nous sollicitons des articles sur tout sujet ci-dessus. À la réunion, l'anglais sera la langue officielle de communications. Il faudrait soumettre d'ici au 1er août 1984 des résumés documentaires d'environ une page (200-400 mots) et indiquer la séance à laquelle la communication conviendrait le mieux. On prévoit un tirage préliminaire pour la conférence et il faudra d'ici au 1er décembre 1984, pour les communications acceptées, les textes au complet, prêts à photographier, de 4 à 8 pages. Il convient d'envoyer les résumés à:

Y.S. Chung (no de tél.: (416) 667-4980), Service de l'environnement atmosphérique (AQRB), 4905, rue Dufferin, Downsview, Ontario, M3H 5T4, Canada.

Les particuliers et les exposants désirant de plus amples renseignements sont priés de s'adresser à Y.S. Chung.

SYMPOSIUM ON SNOW AND ICE CHEMISTRY AND THE ATMOSPHERE

Trent University
Peterborough, Canada
19-24 August, 1984

ORGANIZATION & SPONSORS

The symposium is being organized by the National Research Council of Canada's Sub-Committee on Glaciers and is sponsored by the Royal Society of Canada. Trent University, The Federal Department of Energy, Mines & Resources, the Department of the Environment (D.O.E.), and the Commission on Atmospheric Chemistry and Global Pollution.

ORGANIZING COMMITTEE

R.M. Koerner,	Chairman Energy, Mines & Resources
D.A. Fisher,	Energy, Mines & Resources
C.S.L. Ommaney,	National Hydrology Research Institute (D.O.E.)
W.P. Adams,	Trent University
B. Goodison,	Atmospheric Environment Service (D.O.E.)
D. Whelpdale	Atmospheric Environment Service (D.O.E.)
L. Barrie,	Atmospheric Environement Service (D.O.E.)
W.H. Mathews, F.R.S.C.	University of British Columbia

TOPICS

The main concern of the symposium is source mechanisms of transport and incorporation of aerosols into snow and the sbusequent historic record in ice sheets. Consequently, the main topics to be discussed include:

1. ice core records of particulate and chemical constituents in ice masses.
2. models of transport, air chemistry and climatic change.
3. methods of atmospheric and ice core sampling and analysis.
4. volcanic and cosmic contributions to atmospheric and ice sheet chemistry and,
5. processes of incorporation of aerosols into ice sheets and show.

The scope of the symposium is NOT limited to glacier ice.

CONTRIBUTED PAPERS

The deadline for submission of titles and extended abstracts has been put back to March 15 and should be sent to:

Dr. W.P. Adams
Dean of Science
Trent University
Peterborough, Ontario
K9J 7B8, Canada

Papers presented at the Symposium will be considered for publication provided they have not been submitted for publication elsewhere. Final typescripts of these papers should be sent to W.P. Adams before JULY 1, 1984. Typescripts should be double spaced, and not exceed 6000 words. Details on typescripts will be sent to authors with notification of acceptance of abstracts for the symposium.

ACCOMMODATION

Accommodation has been booked in Champlain and Lady Eaton Colleges of Trent University. These are located beside each other on the Otonabee River, 5 km. north of Peterborough, Ontario. Cost will be CAN $55.00 a day including accommodation, three meals and coffee each day, and athletic and parking privileges. A non-refundable deposit of $50.00 (can.) per person is required.

TRAVEL

Trent University is served directly by Trentway/Wagar limousine/bus service from Toronto Airport (approx. CAN $35.00 return). The limousine can be booked in advance. Peterborough is also served by bus and light aircraft (Air Atonabee flying to Ottawa, Toronto and Montreal).

REGISTRATION

A registration fee of CAN $50.00 (students CAN $20.00) will cover general symposium costs and includes cost of the published proceedings. Because of our financial arrangements the registration fee for off-campus participants will be CAN $100.00.

PAYMENT should be made to the order of:

THE ROYAL SOCIETY OF CANADA

By Bank Draft or International Money Order in Canadian funds and sent with your registration form BEFORE JUNE 1, 1984 to:

Dr. W.P. Adams
Dean of Science
Trent University
Peterborough, Ont
K9J 7B8, CANADA

A surcharge of CAN $10.00 will be charged for late registration.

Journal of Great Lakes Research

The Journal of Great Lakes Research, published by the International Association for Great Lakes Research, is devoted to research on the Great Lakes of North America and other large lakes of the world. A complete, 24-issue set, containing volumes 1-8 of the journal (1975-1982), is available for $120 (U.S. currency). The journal index is available for $5 (U.S.) or free with orders of $50 (U.S.) or more. Regular journal issues devoted to special topics are described below.

Niagara River Pollution Problem
1983; 232 pp.; Sediments, water quality, biota, chlorinated hydrocarbons, trace organics. $5

Contaminants and Surface Films
1982; 137 pp.; Physical-chemical interactions, pesticides, PCB, metals, biotic impacts, modeling. $5

Ecology of Filamentous Algae
1982; 237 pp.; Bangia, Cladophora, Ulothrix field ecology, applied studies--modeling, remote sensing, PCB, annotated bibliography. $15

Long Point Bay—Nanticoke
1981; 162 pp.; Baseline impact analysis for power generating plant, steel mill, oil refinery on Lake Erie; ecosystem characterization. $5

Limnology of Lake Superior
1978; 308 pp.; Historical developments, sediments, climate, energy/water budgets, circulation, transparency, water chemistry, ion loadings, plankton, benthos, fish. $5

Atmospheric Contribution
1976; 225 pp.; Pollutant pathways, sampling and measurement techniques, nutrients, metals, biotic impacts, acid rain. $5

Membership in the International Association for Great Lakes Research includes the journal and is available in several categories: member ($25), student ($15), and library ($50). Membership applications and orders for back issues of the journal should be directed to:

Mr. William L. Richardson
U.S. EPA
Large Lakes Research Station
9311 Groh Road
Grosse Ile, MI 48138

Payment should accompany all orders.

HALIFAX CENTRE - OCEANOGRAPHY KIT

The Halifax Centre is in the process of developing an oceanography "kit" for instructional use by high school science teachers. The intention is to provide instructions and, when necessary, materials to allow science teachers and students to perform a series of lab experiments which use elegant examples from oceanography of fundamental principles in science.

Initially, a limited number of kits, probably less than ten, will be produced. They will contain two physics experiments, one which illustrates diffusion, mixing and wave phenomena, by creating layering at density interfaces by heating, and a second which illustrates electromagnetic current meter.

The Centre would be interested in knowing if any other Centres have such plans or might like to get involved. If so, please contact Fred Dobson, Ocean Circulation Division, BIO, P.O. Box 1006, Dartmouth, N.S., B2Y 4A2, (902) 426-3584, who is in charge of the project.

RESEARCH POSITION DEPT. OF OCEANOGRAPHY, UNIVERSITY OF B.C.

Recent Ph.D with experience in statistical methods and geophysical fluid dynamics sought to participate in the analysis and interpretation of data from an array of cyclesondes (profiling current meter, CTD systems) and current meters in the Strait of Georgia. The candidate should also have the potential of modelling the observations in terms of the non-linear low frequency motion of a stratified fluid of variable depth. The position is available as of 1 November, 1984, for a duration of one year and may be renewed for a second year; it will be filled at postdoctoral (ca $20,700) or research associate (up to ca $27,000) level according to the candidate's experience. In accordance with Canadian immigration requirements, priority will be given to Canadian citizens and permanent residents of Canada. Resumes and three letters of reference should be sent by 1 July 1984 to Dr. S. Pond, Dept. of Oceanography, 6270 University Blvd., Vancouver, B.C., Canada V6T 1W5.

NOTICE TO ALL MEMBERS

In accordance with By-Law 10, Meetings, of the Canadian Meteorological and Oceanographic Society, I am giving notice that the Annual General Meeting will be held Tuesday May 29, 1984 at 7:30 p.m. at Dalhousie University, Halifax. This meeting will include those items listed under By-Law 10(d) which reads:

"A General Meeting, to be called the Annual General Meeting, shall be held each year, on a day and at an hour to be determined by Council, to receive the reports of Council, the auditor or auditors, and the ballot counters, to establish the fees for the next calendar year, to discuss and determine such questions as may be proposed relative to the affairs of the Society, to appoint an auditor or auditors for the ensuing year, and to install the Council elected for the ensuing year."

The agenda for the Annual General Meeting will be published in the Annual Review which will be mailed to all members before the AGM.

AVIS A TOUS LES MEMBRES

Conformément au Réglement 10, Réunions, de la Société de météorologie et d'océanographie, je donne l'avis que l'Assemblée générale annuelle aura lieu mardi le 29 mai 1984, à 1930h au Dalhousie University, Halifax. Cette assemblée examinera les points contenus dans l'Article 10(d) qui se lit:

"Une Assemblée générale, appelée l'Assemblée générale annuelle, est tenue chaque année, au jour et à l'heure déterminé par le Conseil d'administration, afin d'approuver le procés verbal de l'Assemblée générale annuelle précédente, de prendre connaissance des rapports du Conseil d'administration, du (des) vérificateur(s) et des scrutateurs, de fixer les montants des cotisations pour la prochaine année civile, de discuter et de prendre des décisions sur les questions concernant les affaires de la Société, de choisir un (des) vérificateur(s) pour l'année suivante, et de procéder à l'investiture des administrateurs élus pour l'année suivante."

L'ordre du jour pour l'Assemblée générale annuelle sera publié dans le Révue annuelle qui sera posté à tous les membres avant l'AGA.

NOTICE TO ALL MEMBERS / AVIS A TOUS LES MEMBRES

IN ACCORDANCE WITH BY-LAW 4(C) OF THE CANADIAN METEOROLOGICAL AND OCEANOGRAPHIC SOCIETY, I AM PROVIDING YOU WITH:

A) THE LIST OF MEMBERS OF THE CURRENT COUNCIL

B) THE LIST OF NOMINATIONS FOR 1984/85 MADE BY THE NOMINATING COMMITTEE

C) A COPY OF BY-LAW 4(D)

SELON LES TERMES DE L'ARTICLE 4(C) DES RÉGLEMENTS DE LA SOCIÉTÉ CANADIENNE DE MÉTÉOROLOGY ET D'OCÉANOGRAPHIE, JE VOUS FAIS PARVENIR:

A) LA LISTE DES MEMBRES DU CONSEIL EN COURS

B) LA LISTE DES MISES EN CANDIDATURE POUR 1984/85 TELLE QUE RÉDIGÉE PAR LE COMITÉ DES MISES EN CANDIDATURE

C) UNE COPIE DE L'ARTICLE 4(D)

THE COUNCIL OF THE CANADIAN METEOROLOGICAL AND OCEANOGRAPHIC SOCIETY FOR 1983/84 CONSISTS OF:

LE CONSEIL DE LA SOCIÉTÉ CANADIENNE DE MÉTÉOROLOGIE ET D'OCÉANOGRAPHIE POUR 1983/84 SE COMPOSE COMME SUIT:

PRESIDENT	DR. RENÉ O. RAMSEIER	PRÉSIDENT
VICE-PRESIDENT	DR. NEIL CAMPBELL	VICE-PRÉSIDENT
TREASURER	MR. KEN B. YUEN	TRÉSORIER
CORRESPONDING SECRETARY	MR. JOHN C. FALKINGHAM	SECRÉTAIRE CORRESPONDANT
RECORDING SECRETARY	MR. RICK G. LAWFORD	SECRÉTAIRE D'ASSEMBLÉE
COUNCILLORS-AT-LARGE	DR. CHRIS GARRET	CONSEILLERS
	DR. BARRY GOODISON	
	DR. STEVE CALVERT	
LOCAL CENTRE CHAIRMEN	ELECTED LOCALLY / ÉLUS LOCALEMENT	PRÉSIDENTS RÉGIONAUX
AUDITOR	HODGSON, MORRISEY, MAHEU ET NOISEAUX CHARTERED ACCOUNTANTS	VÉRIFICATEUR

NOMINATIONS FOR COUNCIL FOR 1984/85:

MISES EN CANDIDATURE POUR LE CONSEIL POUR 1984/85:

PRESIDENT	DR. NEIL CAMPBELL	PRÉSIDENT
VICE-PRESIDENT	DR. STUART SMITH	VICE-PRÉSIDENT
TREASURER	MR. KEN B. YUEN	TRÉSORIER
CORRESPONDING SECRETARY	MR. ROBERT L. JONES	SECRÉTAIRE CORRESPONDANT
RECORDING SECRETARY	MR. RICK G. LAWFORD	SECRÉTAIRE D'ASSEMBLÉE
COUNCILLORS-AT-LARGE	DR. STEVE CALVERT	CONSEILLERS
	MR. J-G. CANTIN	
	DR. BARRY GOODISON	
LOCAL CENTRE CHAIRMEN	ELECTED LOCALLY / ÉLUS LOCALEMENT	PRÉSIDENTS RÉGIONAUX
AUDITOR	HODGSON, MORRISEY, MAHEU ET NOISEAUX CHARTERED ACCOUNTANTS	VÉRIFICATEUR

BY-LAW 4(D):

NOMINATIONS (IN ADDITION TO THOSE MADE BY THE NOMINATING COMMITTEE) WILL BE ACCEPTED BY THE RECORDING SECRETARY UP TO THE LAST DAY OF MARCH, PROVIDED -

I) THAT THE NOMINEE IS ELIGIBLE FOR THE OFFICE FOR WHICH HE IS NOMINATED,

II) THAT THE NOMINEE ACKNOWLEDGES HIS WILLINGNESS TO ACCEPT OFFICE IF ELECTED BY SIGNING THE NOMINATION, AND

III) THAT THE NOMINATION IS SIGNED BY FOUR MEMBERS

NOMINATIONS SHOULD BE SENT TO THE RECORDING SECRETARY AT THE FOLLOWING ADDRESS:

LES MISES EN CANDIDATURE (EN PLUS DE CELLES PROPOSÉES PAR LE COMITÉ DES MISES EN CANDIDATURE) SERONT ACCEPTÉES PAR LE SECRÉTAIRE D'ASSEMBLÉE JUSQU'AU DERNIER JOUR DE MARS, POURVU -

I) QUE LE CANDIDAT SOIT ÉLIGIBLE AU POSTE POUR LEQUEL IL EST PRÉSENTÉ,

II) QUE LE CANDIDAT CONFIRME SON INTENTION D'ACCEPTER LE POSTE ADVENANT SON ÉLECTION EN SIGNANT L'ACTE DE MISE EN CANDIDATURE, ET

III) QUE L'ACTE DE MISE EN CANDIDATURE SOIT SIGNÉ

LES MISES EN CANDIDATURE DEVRAIENT ÊTRE ENVOYÉS AU SECRÉTAIRE D'ASSEMBLÉE A L'ADDRESSE SUIVANT:

CANADIAN METEOROLOGICAL AND OCEANOGRAPHIC SOCIETY
ATTN: RECORDING SECRETARY
151 SLATER STREET, SUITE 805
OTTAWA, ONTARIO
K1P 5H3

IF THE DEADLINE IS UNLIKELY TO BE MET BY MAIL, PLEASE CONTACT THE CORRESPONDING SECRETARY BY TELEPHONE OR TELEX.

SI VOUS CRAIGNEZ QUE LE COURRIER NE PUISSE NOUS ATTEINDRE AVANT LA DATE DE L'ECHÉANCE, VEUILLEZ CONTACTER LE SECRÉTAIRE CORRESPONDANT PAR TÉLÉPHONE OU TELEX.

JOHN FALKINGHAM
CORRESPONDING SECRETARY/SECRÉTAIRE CORRESPONDANT
(613) 996-5236 TELEX 053-3761

HIGHLIGHTS FROM THE CMOS

Executive Meeting Number 4

The fourth CMOS Executive Meeting of 1983/84 was held on December 20, 1983 in the Board Room of AES's Ice Central in Ottawa. Dr. René Ramseier chaired the meeting. Some of the highlights of the meeting included:

- news that the Society would have a surplus of approximately $13,000 for 1983. The surplus resulted from the revenues from the Banff Congress and the AMS/CMOS Fifth Symposium on Meteorological Observations and Instruments.

- the proposal for accrediatation procedures being developed by the Professionalism Committee for review at the Annual General Meeting in Halifax.

- Dr. René Ramseier's comments and views on his recent tour as the AES/CMOS Speaker.

- the draft set of by-laws has been prepared to meet the Ministry of Consumer and Corporate Affairs requirements for incorporation.

- news that the registration of the name "Chinook" as a publications trademark is proceeding.

At the meeting it was decided that:

- Mr. Rick Lawford will serve as the CMOS observer on the Canadian National Committee for SCOPE (Scientific Committee on Problems of the Environment) for a three year period.

- there will not be an AES/CMOS speaker in 1984.

REPORT ON THE ANNUAL CANADIAN NATIONAL COMMITTEE SCOPE MEETING

On December 13, 1983, the Canadian Committee on SCOPE (Scientific Committee on Problems of the Environment) met in the NRC building on Sussex Drive in Ottawa. Dr. Ted Munn, the Committee's chairman, noted in his opening remarks that a change in the date for the annual meeting would be advisable given the poor weather conditions and the number of similar meetings held in December. During its 6 hour meeting the Committee dealt with items related to its membership and operations, reviewed a number of the international SCOPE projects which have Canadian involvement and considered Canadian participation in future SCOPE meetings and projects. The following paragraphs are intended to provide a review of those discussions which may be of interest to CMOS members.

Dr. Don Miller (NRC) reported on a number of projects nearing completion including the Scope #22 report "Effects of Pollutants at the Ecosystem Level" and a report on a study of the relevance of laboratory tests to the field behaviour of toxic chemicals in the environment. He noted that a new initiative is being planned in the area of ecotoxicology and climate. At present the planning group is looking for authors interested in documenting specific case studies. A second potential study of relevance involves the Comité artiqué international in Monacco which is interested in funding research on dose/response studies in the Arctic. The two criteria set out by the Committee's chairman, Prof. Louis Roy, for funding such a study are that the studies must be done in the Arctic and that they must be international and collaborative in nature. In order to secure Canada's involvement in a coordinated way in these two projects, Dr. Miller will be attending the international SCOPE meeting in New Delhi in February to contribute to a working group involving the new SCOPE project on ecotoxicology and climate. In addition he will be organizing workshops in order to develop dose/response studies in the Arctic. Although plans are very tentative at this stage, it would appear two meetings will be held in Canada and the U.S. during the next two years. Winnipeg was suggested as a possible site for one of the meetings.

Dr. Ross Wein outlined a project which he and a number of other researchers are planning to carry out on fire ecology in the northern coniferous forest. The study which will involve field work in the Wood Buffalo National Park will be directed towards the development of temporal and spatial models which will allow prediction of the ecological impacts of fire. The study will include assessments of fire behaviour, vegetation dynamics, animal behaviour patterns and socio-economic impacts of fire. Cooperators in the project include the Universities of New Brunswick, Manitoba and Alberta. Other interested researchers include scientists from Sweden, the University of Alaska and possibly the Canadian federal government. The Canadian SCOPE Committee gave support in principle to the project.

The concept of a national risk profile was discussed at some length. John Harrity from Environment Canada's Federal Environmental Assessment Review Office (FEARO) outlined some of the ways in which the principles of risk management could be introduced into the Environmental Assessment Process. It would appear that FEARO could provide some support for this project. National Health and Welfare and Dow Chemical have also expressed an interest in the project. It was agreed that a project proposal for a related project which would give adequate attention to the needs for information on risks should be developed.

A number of other projects were discussed including biogeochemical cycles (with specific references to the sulfur, nitrogen and carbon cycles), an assessment of the value of an ecosystem, climate impact assessment, integrated pest control, and the possibility of a symposium on global changes in the environment. While the work on sulfur cycling shows promise because it will open the door to a large body of Soviet literature on the subject. A workshop on the subject held in Russia in October 1983 did not meet expectations. Problems arose because many of the scientists from the West could not reach Russia as a result of the ban placed on travel to Russia subsequent to the Korean jetliner incident. Prof. J.W.B. Stewart of the University of Saskatchewan, one of the major participants in the project, is proposing a second workshop in Calgary in an attempt to obtain more information for the report on sulphar cycling.

Initiatives in the area of the environmental consequences of nuclear war seem to be gaining momentum. Dr. Ted Munn will be responsible for editing a SCOPE report on nuclear war and the environment. The report will be written in layman's language and produced in paperback in 5 or 6 languages for mass distribution late in 1984. It was agreed that a small Canadian sub-committee should be set up to look at the implications of these findings in the Canadian context. Members on the sub-committee will include Drs. Tom Hutchinson, Keith Hage and Mr. Rick Lawford.

As usual I will be glad to seek out information for any CMOS members interested in more details on any of these SCOPE projects. I would also appreciate hearing from anyone who has some views, references or information on projects dealing with the effects of nuclear war on the environment.

Subsequent to the December meeting the U.S. announced that it intended to pull out of Unesco, SCOPE's parent Committee, at the end of 1984. Canada has no plans to withdraw. It is not clear what impacts this decision will have for SCOPE. One repercussion of the U.S. decision which appears to be inevitable is that there will be less money available for SCOPE projects. Optimists claim that Canada's role in Unesco committees will be enhanced while pessimists predict that Unesco reacts to the current crisis. It will be a dark day for international cooperation in the environmental sciences if SCOPE is eliminated or severely hampered by budgetary restraints.

R.G. Lawford

Listing of Available SCOPE Reports and Forthcoming Reports

Available Reports:

SCOPE 2 : Man-made Lakes as Modified Ecosystems, 1972, 76 pp.
SCOPE 5 : Environmental Impact Assessment: Principles and Procedures, second edition, 1979, 208 pp.
SCOPE 7 : Nitrogen, Phosphorus and Sulphur: Global Cycles, 1975, 192 pp. (available from the Swedish Natural Science Research Council, Editorial Service, Wenner-Gren Center, Box 23136, S-104 35 Stockholm, Sweden)
SCOPE 8 : Risk Assessment of Environmental Hazard, 1978, 132 pp.
SCOPE 9 : Simulation Modelling of Environmental Problems, 1978, 128 pp.
SCOPE 10: Environmental Issues, 1977, 242 pp.
SCOPE 11: Shelter Provision in Developing Countries, 1978, 112 pp.
SCOPE 12: Principles of Ecotoxicology, 1979, 372 pp.
SCOPE 13: The Global Carbon Cycle, 1979, 528 pp.
SCOPE 14: Saharan Dust: Mobilization, Transport, Deposition, 1979, 320pp.
SCOPE 15: Environmental Risk Assessment, 180, 184 pp.
SCOPE 16: Carbon Cycle Modelling, 1981, 390 pp.
SCOPE 17: Some Perspectives of the Major Biogeochemical Cycles, 1981, 175 pp.
SCOPE 18: The Role of Fire in Northern Cucumpolar Ecosystems, 1983.
SCOPE 20: Methods for Assessing the Effects of Chemicals on Reproductive Functions (SGOMSEC), 1983
SCOPE 21: The Major Biogeochemical Cycles and their Interactions, 1983

Forthcoming Reports:

SCOPE 19: The Global Biogeochemical Sulphur Cycle, January 1984.
SCOPE 22: Effects of Pollutants at the Ecosystem Level, 1984.
SCOPE 23: The Role of Terrestrial Vegetation in the Global Carbon Cycle: Measurement by Remote Sensing, 1984

With the exception of No. 7, SCOPE Reports can be obtained from:

John Wiley's & Sons Ltd
Baffins Lane
Chichester
Sussex, PO19 1UD
United Kingdom

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Do you have access to a computer and are just itching for a worthwhile application to program? Well, have we got a job for you!

CMOS has become a $100,000 a year operation with all the attendant accounting and financial management requirements. Over the past two years, the Treasurer has been looking into the feasibility of computerizing our accounting procedures. The last word is that it is not cost-effective to go commercial in this endeavor. Knowing that there is a lot of talent among our membership, we have turned to you for ideas and assistance.

As a basic requirement, any financial system must be robust, supported, and of commercial quality. IBM PC's would be great but VIC-20's are probably out. Terminal access to a mainframe would be acceptable. The next requirement is that it be completely portable since the Treasurer changes cities every two years.

If you would like to apply your skills to this problem, phone the Treasurer, Ken Yuen at (613) 995-2058, or write him at the CMOS office for further information.

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