



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



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1982

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MOTS DU PRÉSIDENT

Lorsque le temps des fêtes arrive, il est de coutume de se rappeler les bons moments passés; la SCMO en a eu quelques uns cette année. Notre congrès à Ottawa a sûrement été un grand succès, avec plus de 300 participants et un profit de plus de \$7 000, profit qui nous aidera à supporter Chinook. Au sujet de Chinook, j'ai reçu quelques lettres, toutes favorables à notre initiative; j'en suis d'autant plus heureux que, grâce au travail de E. Kulin, nous avons pu identifier des moyens de diminuer considérablement son déficit. Nous pourrions donc continuer de vous l'offrir gratuitement, jusqu'à ce qu'une décision finale soit prise par l'AGA à son sujet.

Nous avons mis sur pied un comité des publications qui a fait de l'excellent travail et a déjà réussi à négocier des réductions de prix pour Atmosphere-Océan. Le comité s'occupera activement de coordonner les politiques éditoriales de nos publications et de les rendre plus économiques. En particulier, le programme du congrès sera publié sous un nouveau format cette année. De plus, l'exécutif a préparé des lignes directrices pour les "Compte Rendu du Congrès" et nous avons bon espoir que le congrès de Banff aura son "Compte Rendu."

J'ai dernièrement signé une entente avec l'Association des Physiciens du Canada qui nous assure des services de leur secrétariat. Nous avons maintenant le plein contrôle de notre système d'abonnements et de cotisation des membres, moyennant des frais très raisonnables. Si je me permettais de formuler un souhait, je voudrais que nous puissions vous offrir les services à temps partiel d'un(e) directeur ou secrétaire exécutif pour soulager un peu la lourde tâche des volontaires du comité exécutif!

Enfin, parmi les bonnes nouvelles, il y a de la vie du côté des météorologistes d'exploitation dont 50 ont demandé l'autorisation de former un groupe d'intérêt spécial; une résolution sera soumise au Conseil en janvier en ce sens.

Tout en vous invitant à participer encore plus activement à la vie de la Société, je vous souhaite une bonne et heureuse année.

R. Asselin
Président



MESSAGE FROM THE PRESIDENT

At this time of year, it is customary to recall the good moments of the year gone by; the CMOS has had several this year. Our Congress in Ottawa was certainly the greatest success, with upwards of 300 participants and a net profit of more than \$7,000. Several requests for copies of papers have been received and the abstracts were even reprinted in the September issue of Resource Development.

I have received a few letters about Chinook, all in favour of our initiative, and I am that much happier about it because, thanks to the good work of E. Kulin, we have been able to identify ways to reduce its deficit considerably. We will therefore be able to continue to offer it to you free, at least until a formal decision is made by the AGM.

The Publications Committee which we have set up has already succeeded in negotiating price reductions for the printing of AO and expects to realize economies for all our publications. It will also work actively in co-ordinating the various editorial policies. In particular, the Congress program will be published in a new format next year. Moreover, the Executive has prepared guidelines for Congress Proceedings and we have hopes that the Banff Congress will have its proceedings, at least for the theme papers.

I recently signed an agreement with the Canadian Association of Physicists which ensures us that we will be provided with excellent secretariat services at a very reasonable cost. In this way, we now have full control of our subscription and membership systems. If I dared make a wish, I would like us to acquire the part time services of an executive director or secretary in order to ease up the heavy load which bears on the volunteer members of the Executive Committee. May our financial situation continue to strengthen so that this dream becomes a reality!

Finally, more good news: there is life out there among the operational meteorologists! Fifty of them have petitioned Council for permission to form a Special Interest Group. This will be considered in January.

While inviting you to participate ever more actively in the life of the Society, I wish you all a Happy New Year.

R. Asselin
President



NEW MEMBERS - 1982



ESL ENVIRONMENTAL SCIENCES LTD.,
Vancouver, B.C.
Meteorology

PAUL IAN JOE
Toronto, Ontario
Meteorology

C.R. Burn
Ottawa, Ontario
Student, Meteorology

Peter R. Reid
Vancouver, B.C.
Meteorology

David G. Huges
Edmonton, Alberta
Meteorology

G.T. Hunter
Mississauga, Ontario
Meteorology

G.P. Klaassen
Willowdale, Ontario
Student, Meteorology

Raymond Rioux
Pierrefonds, Quebec
Meteorology

C. Harold Ritchie
Pointe Claire, Quebec
Meteorology

Barry R. Ruddick
Halifax, Nova Scotia
Oceanography

NEW MEMBERS - 1983

Barry R. Ruddick
Halifax, Nova Scotia
Oceanography
Associate



NEW CORPORATE MEMBERS (1983)

I.E.C. Beak Consultants
Richmond, British Columbia

Envirocon Ltd.
Vancouver, British Columbia

Seaconult Marine Research
Ltd.
Vancouver, British Columbia

MEMBERS WITH UNKNOWN ADDRESSES DEC. 12, 1982

Anyone who can provide information regarding changes of address for the following are asked to notify the corresponding secretary or newsletter editor.

Dan Budinski
Apt. # 305
8708 106 Street
Edmonton, Alberta
T6E 4J4

N. Bussières
10725 Apt. 301 Boul.
St. Laurent
Montreal, Quebec
H3L 2P8

Mr. K.J. Johnstone
817 - 500 Murray Ross Pkwy.
Downsview, Ontario
M3J 2Z3

Serge Lafrance
3450 Hutchinson #802
Montreal, Quebec
H2X 2G5

Dr. Doanld McEwen
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U. of Sask. - 3409 Harrington St.
Saskatoon, Saskatchewan
S7N 0W0

Mr. K.C. Morris
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235 Sherbrooke St. West
Montreal, Quebec
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K. Nakata
6 3 Onogawa Yatabe
Tsukuba Ibaraki, Japan

A.H. Umar
202 7637 4A St. S.W.
Calgary, Alberta
T2V 1A2



CORPORATE MEMBERS

NORDCO Ltd.
St. John's, Newfoundland

Bristol Aerospace Ltd.
Winnipeg, Manitoba

Aanderaa Instruments Ltd.
Victoria, British Columbia

Panarctic Oils Ltd. Library
Calgary, Alberta

Hermes Electronics Ltd.
Dartmouth, Nova Scotia

Wellsdale Research Limited
Edmonton, Alberta

Intera Environmental
Consult Ltd.
Calgary, Alberta

Alberta Agriculture
Advisory Committee on
Weather Modification
Three Hills, Alberta

FENCO Consultants
Calgary, Alberta

Geneq Inc.
Anjou, Quebec

Airflow Developments
Canada Ltd.
Mississauga, Ontario

Hymeteq A.L. Ltd.
Downsview, Ontario

M.E.P. Ltd.
Downsview, Ontario

MacLaren Plansearch Ltd.
Dartmouth, Nova Scotia

Petro Canada
Calgary, Alberta

MacDonald, Dettwiler
& Assoc. Ltd.
Richmond, British Columbia

Canada Oil and Gas
Lands Administration
Ottawa, Ontario

SUSTAINING MEMBERS

A.E. Boyer - Ontario Hydro
Toronto, Ontario

The CMOS NEWSLETTER is a bi-monthly publication of the Canadian Meteorological and Oceanographic Society. Readers are encouraged to submit contributions, correspondence, and news of interest; but the responsibility for articles and news rests, in every instance, with their respective authors. Their views are not necessarily those of CMOS.

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Associate Editors: André Bolduc
Rick Lee

Le NEWSLETTER de la SCMO est une publication bimestrielle de la Société canadienne de météorologie et d'océanographie. Les lectures sont invitées à soumettre leurs contributions, lettres ou nouvelles, mais la responsabilité des articles et des idées exprimées est dans tous les cas celle de l'auteur. Leurs idées ne sont pas nécessairement celles de la SCMO.

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Rick Lee

CMOS CENTRES SCMO
ACTIVITIES/ACTIVITÉS

SASKATCHEWAN CHAPTER

In an effort to interact with the public, it was decided to promote the science of meteorology and oceanography through presenting a series of lectures at the public library. The series attracted a wide variety of people, and a lively discussion period with the audience invariably followed. The topics and speakers were as follows:

November 3 - Acid Rain

Resource Person: S.R. Shewchuk
Saskatchewan Research Council

What is meant by the term "acid rain" and how can it be applied to the Saskatchewan scene? Acid rain is one of the premier environmental issues of today. Industrial emissions of sulphur and nitrogen oxides are being incorporated into the air and rain at an ever-increasing rate. The present extent of acid rain within the global and within the local context will be addressed in this presentation.

November 10 - Water Resources

Resource People: J. Whiting and
E. Wheaton
From the Saskatchewan Research Council

Saskatchewan's water use in perspective with the water supply now and in the future. The talk will present the sources of the provincial water supply, who has responsibility in managing the supply, and where is the information derived. Since water is a limited resource in southern Saskatchewan, how we can preserve water and where we can obtain more water.

November 17 - Climate Change

Resource People: J.L. Bergsteinsson and
J. Maybank
From the Saskatchewan Research Council

Global trends in climate may be changing due to natural or man-induced forcing functions. To what extent have trends been confirmed, and what are possible mechanisms for climate change. These are some of the issues to be explored in this lecture series.

The possible impact of various world wide scenarios and their implications for Saskatchewan's future activity will be explored.

November 24 - Weather and Forecasting

Resource People: K. Jones
From Environment Canada
and
E. Ripley
From the University of Saskatchewan

The importance of a weather service for Canada will be presented. What are the procedures for collecting weather data both on a national and regional scale? What special services are offered to the citizens of the Saskatchewan region? Observation of weather and preparation of weather forecasts will be the primary focus of this subject.

Other areas to be covered include: farm weather forecasting, weather radio services, and severe weather forecasting.

A particularly successful meeting of the Ottawa Centre was held on November 22, during which a 30-minute film entitled "Gulf Stream" was shown, followed by a discussion and recounting of adventures by the producer Mr. Bill Hanson. The film, a product of the National Film Board, vividly depicted the movement of the Gulf Stream ocean current from the equator to the south of Nova Scotia, as viewed by the producer while sailing his trimaran "Freya". Colourful displays revealed changes to and interactions of meteorological, biological, and oceanographic conditions during the voyage. For members and guests alike, it was an informative and entertaining evening, to which the National Film Board's assistance and encouragement contributed greatly.

Following the meeting, a wine and cheese social gathering topped off the evening. For a Society with only 70 members in the Ottawa area, the attendance by 122 was a remarkable achievement indeed!

HIGHLIGHTS OF THE CMOS EXECUTIVE MEETING NO. 3
OCTOBER 13, 1982

DOE Public Consultation - The President felt that CMOS participation would not have been appropriate, due to the number of DOE employees on the Executive. In post-analysis, however, CMOS perhaps should have participated, promoting its own image and that of AES.

Shoe Cove - The Newfoundland Centre is actively involved in opposing the closure of the Shoe Cove satellite read-out station operated by EMR Canada. The closure has been delayed.

World Communication Year - A detailed write-up has been placed in the Letters to the Editor section of the Newsletter.

University Students - The question of how to attract students to oceanography and meteorology was discussed and, in particular, what role CMOS should play.

Subventions - The proposed subventions were not acceptable to at least three Centres. It was moved and carried that full subventions based on the accepted formula be made to the Centres.

Professionalism Committee - The Executive is still in the process of forming this Committee.

Special Interest Groups (SIG's) - There are now 47 members associated with the Agriculture and Forest Meteorology SIG. The Hydrology SIG intends to publish a newsletter. A new SIG on Ice is in the making.

Andrew Thomson Memorial Lecture - CMOS historically donates \$500 to this lecture every two years. Next year's offer is to be decided upon acceptance of a paper submitted to Atmosphere-Ocean. In addition, the possibility of video-taping the lecture for replay at Centres and universities is to be investigated.

CAP/CMOS Agreement - M. Jento and R. Asselin have signed an agreement that requires CAP to perform most of the administrative services previously handled by the University of Toronto Press or, during 1982, by the Executive.

Congress Proceedings - This is an agenda item needing further deliberation and refinement. It is expected that a set of guidelines will evolve at the next meeting.



SPECIAL INTEREST GROUPS

To bring the activities of CMOS Special Interest Groups (SIG's) to the attention of the general membership, a new column on SIG's is being initiated. At present, the Society recognizes three such groups (with contacts as noted):

- Air Pollution:** Dr. John Reid
Suite 811
50 Inverlochy Blvd.
Thornhill, Ontario
L3T 4T6
Bus. Phone: (416) 667-4789
- Hydrology:** Mr. D.G. Shaefer
3653 Edgemont Blvd.
North Vancouver, British Columbia
V7R 2P6
Bus. Phone: (604) 732-4856
- Agriculture & Forestry:** Dr. Roger Street
CCAI
Atmospheric Environment Service
4905 Dufferin Street
Downsview, Ontario
M3H 5T4
Bus. Phone: (416) 667-4907

Much interest has been generated by the proposed Operational SIG and a new SIG on Ice is now being suggested (see item below). Each group is encouraged to submit information on their activities to the Newsletter as a means of attracting new members and keeping the Society informed of their activities.

SIG - Ice

As of the XVIth CMOS Congress in Ottawa, there has been on-going interest expressed toward the formation of an SIG on floating ice. Members who would wish to participate in such a group or wish further information about its concept are asked to notify the Ice Group Co-ordinator before the end of January 1983. It is expected that this group will be formalized in time to participate at the next CMOS Congress, to be held in Banff.

- Ice Group Co-ordinator:** Dr. R.O. Ramseier
c/o Ice Centre
Environment Canada
3rd Floor, 365 Laurier Avenue
Ottawa, Ontario
K1A 0H3
Bus. Phone: (613) 995-5630

PUBLICATIONS COMMITTEE

A second meeting was held in November to discuss terms of reference as presented by editors of the CMOS Newsletter, Climatological Bulletin, Chinook, and Atmosphere-Ocean (A-O). In general, the scope and aims of each publication are quite well defined and only one or two areas of potential overlap have been identified. As a note of interest, Atmosphere-Ocean is issued four times per year at 1,300 copies each; the CMOS Newsletter is generally issued five times per year at 950 copies each; the Climatological Bulletin, twice per year at 250 copies each; and Chinook is published four times per year at up to 1,500 copies each issue.

The Congress issue of A-O was discussed as a separate item, with emphasis centred on format and cost. It was the consensus of the Committee that this particular issue could be reformatted into two volumes to better meet the needs of the Society and its members. A preliminary estimate of overall costs involved in adopting the Newsletter format for these issues indicated significant savings. In the light of employing new ideas and concepts, a presentation to the Committee was made by representatives of the University of Toronto Press on site. Included were various printing formats and logos designed for the University community, their state of printing automation and computerization, and a tour of plant facilities. Their concept of a unified publications policy was considered to have possible future applications in CMOS, and it was suggested that this matter should be explored in greater detail in the near future.

SCITEC BECOMES AASC

On November 29, 1982, the annual general meeting of the Association of the Scientific Engineering and Technological Community (SCITEC) of Canada approved a change of its name and constitution and became the Association for the Advancement of Services in Canada (AASC). In doing so, the association ceased to be an "umbrella society" for the co-ordination of the work of other member societies and decided to concentrate its effort "to foster understanding of the significance of science, technology and engineering to Canadian society, and thereby to promote the advancement of science for the social, economic and cultural welfare of Canadian society." For more information, phone (613) 232-0240.

SCITEC DEVIENT AASC

Le 29 novembre 1982, l'assemblée générale annuelle de l'Association des Scientifiques, ingénieurs et technologues du Canada (SCITEC) a approuvé un changement de nom et de constitution et est devenue l'Association pour l'avancement des sciences au Canada (AASC). Ce faisant, l'association a cessé d'être une société parapluie pour les sociétés membres et a décidé de "promouvoir la compréhension de l'importance de la science, la technologie et le génie pour la société canadienne et ainsi de faire valoir l'avancement de la science pour le bien-être social, économique et culturel de la société canadienne." Pour information, appelez (613) 232-0240.

R. Asselin



YOUTH SCIENCE FOUNDATION

The AGM of the Youth Science Foundation was held in Ottawa on October 18 and was attended by CMOS member Henry Watson. He reported that collaboration by CMOS with the Y.S.F. in activities associated with the 1985 International Year for Youth was a possibility that should be considered by the Society.

A "Think Tank" type of discussion on this subject is planned for a Y.S.F. Board of Directors meeting to be held in Ottawa in February 1983. At this meeting, a first attempt will be made to identify the direction and extent of Y.S.F. participation, and those Departments of various government levels and Learned Societies that share an interest will be invited to send a representative to this meeting.

Henry suggests CMOS might consider a collaboration with Y.S.F., through its country-wide centres and chapters, along the following lines:

- Visits to weather stations and to forecasting centres, etc.
- Loans of Stevenson Screens and other equipment to selected schools.
- Invitations to students (and enthusiastic teachers and professors) to attend local CMOS meetings, with perhaps, on occasion, some talks on the basic elements of Meteorology and Oceanography.
- Suggestions to students for analyzing weather and oceanographic data, preferably those collected by themselves, but not excluding documented data.

Centres are encouraged to actively consider this proposal and to contact the Society's Executive.

Ed.

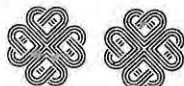
On August 20, 1982, the Alberta Research Council appointed Dr. Guy Goyer to the position of Research Fellow. Dr. Goyer was Head of the Atmospheric Sciences Department for seven years prior to managing a UN weather modification project in Spain in 1981. As a Research Fellow, Dr. Goyer will apply his many years of experience in weather research to the development of meteorological criteria for predicting lightning, and to the development of a short range lightning warning system. Such a system would possibly permit a rerouting of electronic power transmission from threatened lines of the transmission network. It may also permit mobilization of forest fire fighting forces to the most threatened areas before lightning occurs.

Dr. Goyer proposes to analyze the radar echo characteristics at the time and location of each damaging lightning stroke as reported by Calgary Power since 1976. He will then seek the strongest correlation between the damaging lightning stroke and a radar echo characteristic such as reflectivity, height and area. The development of the storm will be studied prior to, and after, the time of the stroke. The digital weather radar data processing facility developed by the Alberta Research Council's Atmospheric Sciences Department should prove a powerful tool for such analysis, since it can display the storm intensity in horizontal or vertical slices at prescribed times and list all pertinent storm characteristics.

HUNTSMAN AWARD FOR EXCELLENCE IN OCEANOGRAPHY

Dr. Christopher Garrett, a professor of oceanography at Dalhousie University received the 1982 A.G. Huntsman Award during a ceremony at BIO on October 27, 1982. The Award was established by BIO to recognize excellence of research in and outstanding contribution to the marine sciences, in one of the three categories annually - marine geosciences, marine biology and physical/chemical oceanography, the latter being Dr. Garrett's field of expertise. He has received a number of awards, amongst them the 1979 CMOS President's Prize.

Ed.



WORLD COMMUNICATIONS YEAR

On November 19, 1981, the United Nations General Assembly, in consultation with the International Telecommunication Union (ITU), the Economic and Social Council and other specialized agencies, officially proclaimed 1983 as World Communications Year and called upon all nations to develop an awareness of the importance of transport and communications. The theme of the Year is "Development of Communications Infrastructures," with particular emphasis on the needs of the developing countries.

In recent years, all people have become more aware of the important role played by telecommunications and their networks. They are the basis for social, cultural and economic progress and are an essential part of the infrastructure of administration and of scientific activities, such as the provision of meteorological services, which require real-time data communications. Telecommunications (high-quality national and international voice circuits, telex, maritime and aeronautical radio communication services, data transmission, sound and TV broadcasting services, international cable and satellite communication links) place people of all nations in contact with one another and with the events and peoples of the world.

The cornerstone of the system is international co-operation, essential for ensuring the smooth functioning of the world telecommunications network. This co-operation has enabled all the telecommunication systems developed over the past century to be gradually extended to the public as a whole, and in future will pave the way to a more equitable distribution throughout the world of those facilities that draw mankind together by overcoming time and distance and eliminating even psychological barriers.

Nominations are requested from members and Centres for the 1982 CMOS Awards to be presented at the 1983 Annual Meeting. Five awards are open for competition: (1) the President's Prize for an outstanding contribution in the field of meteorology and/or oceanography by a member of the Society; (2) the Dr. Andrew Thompson Prize in Applied Meteorology, for an outstanding contribution by a member in that field; (3) the Graduate Student Prizes, for contributions of special merit; (4) the Rube Hornstein Prize in Operational Meteorology, for outstanding service in providing operational meteorological service; and (5) the prize in Applied Oceanography. The awards will be made on the basis of contributions during the 1982 calendar year, except (4) which may be awarded also for work performed over a period of years.

Nominations are also requested for the award of citations to individuals or groups in Canada who have made some outstanding contribution in helping to alleviate pollution problems or in developing environmental ethics.

All nominations should reach the following address not later than January 15, 1983:

Dr. David Huntley
Department of Oceanography
Dalhousie University
Halifax, Nova Scotia
B3H 3J5



ANNÉE MONDIALE DES COMMUNICATIONS

Au Canada, le téléphone est une commodité que l'on retrouve dans presque chaque foyer, exception faite de certaines régions rurales ou des vastes régions isolées du pays. Bon nombre de Canadiens se permettent même le luxe d'avoir à la maison deux, trois, quatre téléphones -- en couleurs bien entendu.

Il y a sur cette planète plus de 550 millions de téléphones. Il serait donc facile d'en déduire qu'au moins une famille sur deux possède le téléphone à domicile. Malheureusement, la réalité est toute autre, les trois quarts de tous ces téléphones se trouvant dans seulement huit pays, dont le Canada.

Et le téléphone n'est qu'une des multiples facettes de ce que représentent les communications modernes. Au cours des dernières années, grâce aux bouleversements technologiques dont nous sommes tous témoins, de plus en plus de gens sont devenus conscients de l'importance des divers modes de communication. Fondement du progrès économique, social et culturel, les télécommunications -- qu'il s'agisse de circuits téléphoniques nationaux ou internationaux, de télex, des communications radio, aéronautiques et maritimes, de transmission de données pour les services météorologiques, de télévision, de liaisons internationales par câble et par satellite -- mettent les gens de tous les pays en contact les uns avec les autres, avec les événements et les peuples du monde entier. Malheureusement, comme c'est le cas pour le téléphone, tous ces modes de communication sont très inégalement répartis dans le monde. Nombre d'autres services que nous tenons pour acquis, comme la radio ou la télévision, sont encore inexistantes dans d'autres pays.

C'est dans cette optique que le 19 novembre 1981, l'Assemblée des Nations unies a proclamé 1983 l'Année mondiale des communications. Elle en a aussi profité pour inviter toutes les nations à sensibiliser les gens à l'importance des transports et des communications. Axée sur les besoins des pays en développement, l'Année mondiale des communications fournira à chaque pays l'occasion d'étudier en profondeur ses politiques en matière de communications. Elle devrait aussi permettre d'ouvrir la voie à une distribution équitable des infrastructures de communication -- des outils qui rapprochent l'humanité en supprimant temps, distances et même barrières psychologiques.

With this in mind the UN General Assembly declared "that a World Communications Year would provide the opportunity for all countries to undertake an in-depth review and analysis of their communications policies and stimulate the accelerated development of communications infrastructures."

The International Telecommunication Union has been designated the lead UN agency for the worldwide preparation and celebration of World Communications Year (WCY) 1983, with responsibility for co-ordinating the activities of its 157 member countries and of the interorganizational aspects of the programs and activities of other agencies (the WMO is represented on the Inter-Agency Committee for WCY). Founded in 1865, the ITU is the world's oldest intergovernmental organization and is the UN's specialized agency responsible for planning, regulating, co-ordinating and standardizing international communications. It operates in the spirit of "give and take," with member countries exchanging information and assistance.

The General Assembly urges governments and private organizations and all communications users to participate actively in WCY 83, and to co-operate with the Secretary General of the ITU in attaining these principal objectives of the Year:

- to increase the scope and effectiveness of communications as a force for economic, cultural and social development;
- to stress the expansion and refinement of communications infrastructures;
- to promote the development of a complete worldwide communications network, so that no one will be isolated from the local, national or international community;
- to call for harnessing all resources to accomplish the objectives; and
- to focus on the analysis, planning and development of national communications infrastructures in all countries to meet their communications needs.

On May 17, 1982, in announcing plans for WCY on the occasion of the 14th World Telecommunications Day, Francis Fox called upon governments and the private sector to co-operate in Canada's participation. "Because of our expertise in all aspects of communications technology, Canadians are in a unique position to contribute to international development and undoubtedly will wish to play an active role in promoting the Year," Mr. Fox said.

The activities of WCY 83 will be conducted on three levels -- national, regional and international -- but the focus will be placed on activities at the national level. For the success of the Year, national committees should be organized to formulate and implement a program of activities and to co-ordinate them with regional and world programs. They should feature wide representation from government and non-government organizations, including posts and telecommunications, radio, television, press and films, transport, industry, health, agriculture, education, national planning groups, users' associations, professional associations, radio amateurs, and others.

Through the establishment of national committees, each country will define its own needs, identify the obstacles that impede the balanced development of communications, propose solutions to overcome them, and explore ways of translating the decisions into reality.

All the activities associated with the WCY program are to be financed on a voluntary basis. Contributions of all kinds are needed: money, equipment, services, expertise, and others. It is the responsibility of the national committees to secure funds for their activities, except for certain projects financed by international aid.

Programs for the year comprise three types of activity: specific projects, seminars and symposia, and information activities. Participants may act alone on a project, or work in conjunction with other organizations. They may take responsibility for a complete project or a specific part of a project.

..... to be continued.

ANNEE MONDIALE DES
COMMUNICATIONS
WORLD COMMUNICATIONS
YEAR
ANNO MONDIALE DELS
L'INFORMAZIONE

1983

En vue de cette année mondiale, c'est l'Union internationale des télécommunications (UIT) qui a été chargée de coordonner les activités de ses 157 pays membres et des aspects interorganisationnels des programmes et des activités d'autres agences des Nations unies, dont l'Organisation météorologique mondiale (OMM). Fondée en 1865, l'UIT est la plus ancienne organisation intergouvernementale. Elle a pour tâche principale de normaliser les communications internationales et fonctionne selon un système d'échange de services. En d'autres termes, chaque pays membre fournit des renseignements et reçoit données et aide en contrepartie. Cette coopération internationale est d'ailleurs essentielle au bon fonctionnement du réseau mondial de télécommunications. C'est ce qui a permis à une bonne partie du globe d'avoir progressivement accès à tous les systèmes mis au point depuis cent ans.

Mais notre travail ne saurait s'arrêter là; il reste encore énormément de pain sur la planche. Aussi, à l'occasion de l'Année mondiale des communications, l'UIT invite-t-elle tous les gouvernements, organismes privés et grands usagers des communications à participer activement à la réalisation de ses objectifs principaux: accroître le rôle et l'efficacité des communications en tant que moyen de développement économique, social et culturel; mettre l'accent sur la mise au point ou l'amélioration des infrastructures de communications, particulièrement dans les pays en développement; et enfin, favoriser la constitution d'un réseau complet de communications mondiales, de sorte que personne ne soit isolé de la communauté locale, nationale ou internationale.

Bien sûr, diront les sceptiques, voilà de belles paroles utopiques. Pourtant, si l'on cite en exemple les récentes innovations du Canada dans le domaine des télécommunications, il devient alors plus facile de croire en la réalisation de ces objectifs à l'échelle mondiale.

Il y a à peine 25 ans, les satellites de communications ne signifiaient guère plus que de la science-fiction. Par contre, nos problèmes de communications, eux, étaient bien réels. Bien que la majorité des Canadiens se retrouvent le long de la frontière américaine, de nombreux autres y vivent éparpillés dans le Grand Nord sur des milliers de kilomètres carrés. Face à une géographie et un climat défavorables à la communication, il nous fallait donc mettre sur pied des réseaux nouveaux qui nous permettraient de défier ces obstacles quasi insurmontables.

Aujourd'hui, nous pouvons nous vanter d'avoir réussi ou, du moins, d'être engagés sur la bonne voie. Nos réalisations au cours des 20 dernières années sont fort éloquentes. Le Canada est en effet devenu l'un des champions de l'espace, étant le troisième pays à avoir mis un satellite sur orbite. Avec les récents lancements des satellites Anik D-1 et Anik C-3, il en compte maintenant onze à son palmarès. Aujourd'hui, grâce aux satellites de télécommunications, tous les Canadiens, où qu'ils habitent, ont accès à des services insoupçonnés il y a quelques années. Télé-médecine, télé-enseignement, radiotélédiffusion en Inuit, Télidon, bureautique, recherche et sauvetage par satellite, cartographie satellisée -- voilà quelques-unes des applications déjà en cours ou sur le point de l'être. Bref, toutes ces réalisations font du Canada un chef de file en matière de communications et lui confèrent, de ce fait, une obligation "morale" d'offrir son expertise aux autres pays.

"Étant donné notre savoir-faire dans tous les domaines de la technologie des télécommunications," a déclaré M. Francis Fox en annonçant les projets du Canada pour l'Année mondiale des communications, "nos possibilités de contribution au développement international sont uniques et nous avons bien l'intention de promouvoir activement cette grande célébration."

Les activités de l'Année mondiale des communications se dérouleront à trois échelons: régional, national et international, mais plus spécialement au niveau national. Pour le succès de cette entreprise, il faudra créer des comités nationaux afin d'assurer la coordination d'un programme d'activités concrètes à tous les niveaux. Tous les organismes gouvernementaux et non gouvernementaux devraient être largement représentés.

..... à suivre.





BOOK REVIEW

Title: MAN, CLIMATE AND ARCHITECTURE

Author: B. Givoni

Second Edition, Applied Science Publishers Ltd., 1976, 483 pages

The book is composed of seven main parts, each containing several chapters. The subject areas are:

1 - The Climatic Elements

The entire first chapter is devoted to this subject and provides a general introduction, designed to familiarize the reader with the climatic elements. It briefly outlines solar radiation and its features, longwave radiation, air temperature, and related topics. The author's clarity of style makes it well worth reading.

2 - Bioclimatology

The subjects presented in these four chapters are discussed with great clarity and provide an excellent introduction for anyone wishing a general understanding of the topic. They also present fundamental concepts for the reader wishing to pursue the subject further. For instance, in the last chapter, the author examines thermal indices. These are used to express the combined effects of environmental factors on the physiological and sensory responses of the body. The author analyzes indices of the Effective Temperature, Resultant Temperature, Thermal Stress, and Heat Stress. Considerable detail is devoted to each index and conditions of application are clearly stated. A number of nomograms and formulae are included for the calculation of these indices.

3 - Thermal Effects of Building Materials; Wetness

The first of these chapters discusses the thermophysical properties of building materials. Surface characteristics are presented with respect to radiation (absorptivity, emissivity), followed by a brief discussion of convective transfer processes (thermal or forced) at a surface. Conductance and heat capacity are outlined, followed by a detailed description of three methods of calculating the resistance and heat capacity of a building envelope, given the order of layers of building components. In the next chapter, the author examines the thermal effect of building materials and continues with a discussion of heat capacity and wall thickness. He then goes to theoretical and experimental methods used to predict indoor surface temperatures, concluding with a discussion of the effect of materials on internal heating. This chapter covers a large number of new concepts linking meteorology to architecture.

The author points out the vital role of the roof in a building and divides roofing into two categories: heavyweight roofs, homogeneous or not, and lightweight roofs with either one or two layers. As in the preceding chapter, several new concepts are introduced in a clear, concise style.

In the last chapter, the author deals with wetness in buildings. He stresses that wetness constitutes a potential hazard to health and comfort, as well as a source of aesthetic and material damage. A sound understanding of mechanisms leading to water seepage through the building envelope is presented and special attention is given to its effects. Various other mechanisms involved are analyzed in conjunction with factors affecting condensation (indoor vapour pressure level, the temperature and absorptivity of the internal surfaces and the vapour transmission of the walls) and the effects of cold bridges on internal surface temperatures are outlined.

4 - Solar Orientation and Indoor Climate; Windows

Here, the author discusses control of incident solar radiation in conjunction with sun motion, as well as variations in solar radiation falling on surfaces with varying orientations. The second chapter deals with the effect of building orientation on indoor climate. This is followed by an evaluation of the combined thermal effect of long-wave radiation, short-wave radiation and the outdoor air temperature, as well as the effect of the colour of a building envelope. He provides formulae to estimate temperature on horizontal and vertical surfaces and gives a summary of the effects of wall orientation, insulation and ventilation. The final chapter deals with the thermal effect of windows, and presents a computer-aided procedure to design shading devices. Several examples are cited.

5 - Ventilation

Three functions of ventilation are outlined as primary factors in determining health, comfort and well being. In dealing with health maintaining ventilation, which involves maintaining disagreeable odours at an acceptable level, the author provides minimum ventilation rates as required in various countries. Thermal stress indices considered in a preceding chapter facilitate his assessment of thermal comfort needs, and the author devotes some comment to structural cooling, describing its effect on indoor temperature as a function of type of material and thickness of walls. The second chapter covers physical mechanisms of air flow through a building envelope induced by pressure gradients from external wind flow and temperature gradients between the indoor and outdoor air. The author examines the effect of window orientation and size, and gives a formula for calculating indoor air velocity as a function of outdoor wind speed and the ratio of window area to wall area.

6 - Adapting Building Design and Materials to Climate

The author discusses the range of variation in climatic elements, and the existing methods used to determine human requirements and satisfactory design principles in relation to these elements. He outlines the method of Olgyay and Olgyay in some detail, then proposes one of his own, supported by a bioclimatic chart. Thermal properties of structures in relation to climate are analyzed and the author specifies required thermal resistance values in a number of countries (Austria, Scandinavia, France, West Germany). The last two sections deal with the selection of materials for cold and hot regions, followed by a calculation of minimal thermal resistances for different wall types and different outdoor conditions. The second chapter deals with specific applications. The author classifies climate into four main types and eleven sub-types and concludes with a discussion of the problem of heating in a sub-tropical climate.

7 - Natural Energies; Prediction of Indoor Temperature

Solar energy is examined in some detail, although other methods primarily intended for cooling are also discussed. The author examines two types of non-focusing solar collectors for residential use, as well as the question of the storage of thermal energy. The section devoted to cooling examines two main processes (solar absorption cooling and evaporation and convection cooling). The final chapter describes methods for predicting indoor temperature, given structural features and climatic conditions. Various methods are analyzed, including Mackey and Wright's "sol-air" temperature method, Bruckmayer's total thermal time constant method, van Gorcum's electrical equivalent method, the response factor method of the Canadian scientists Stepheson and Mitalas, as well as Raychoudhury's method (an extended application of Bruckmayer's). A final method, developed by the author, is outlined and results compared with those from the above models.

The reader will find a long list of useful reference works at the end of the study.

In conclusion, it may be readily affirmed that anyone interested in the practical application of meteorology will find this book well worth reading.

Richard Leduc

PARUTIONS



Service hydrographique du Canada. Guide nautique, Voie d'eau Trent-Severn, 4^e éd., 1982. Ottawa, Ministère des Pêches et des Océans, 1982. 101 p.

(En vente au Centre d'édition du gouvernement du Canada, Approvisionnements et Services Canada, Hull (Québec), Canada K1A 0S9, ou au Bureau de distribution des cartes marines, Ministère des Pêches et des Océans, C.P. 8080, 1675, chemin Russell, Ottawa (Ontario), Canada K1G 3H6. N^o de cat. FS 75-315/1982F.)

Les Guides nautiques sont édités en vue d'aider les navigateurs, en amplifiant les informations portées sur les cartes et en ajoutant d'autres qu'il est impossible de mettre sur celles-ci. En éditant ce guide, on présume que l'utilisateur possède la connaissance de base sur la navigation des très petits batiments.

Ce volume couvre la voie d'eau Trent-Severn à partir de ses approches sud, à Trenton (Ontario), dans le lac Ontario, jusqu'à son extrémité nord, à Port Severn (Ontario), dans la baie Georgienne; on y trouve aussi une description des lacs Simcoe et Scugog et de la rivière Scugog.

Les deux publications suivantes ne sont pas de nouvelles parutions mais elles pourraient s'avérer très utiles aux personnes s'intéressant aux sciences de la mer ou à la glace de mer plus particulièrement. Les deux sont bilingues et disponibles gratuitement.

Bradford, J.D., et M. Moline (compilateurs). Bibliographie sur la glace de mer dans le nord et autres sujets connexes, Publ. spéc. can. sci. halieut. aquat. 45. Ottawa, Ministère des Pêches et des Océans et Ministère des Transports, 1980. 171 p.

(On peut se procurer cette publication en s'adressant à la Direction des Affaires océaniques et aquatiques, Ministère des Pêches et des Océans, 240, rue Sparks, Ottawa (Ontario), K1A 0E6 ou à la Garde côtière canadienne, Ministère des Transports, Ottawa (Ontario) K1A 0N5.)

Cette bibliographie limite la matière aux sujets qui se rapportent de près ou de loin aux problèmes que représentent les glaces marines pour les bateaux. Bien que l'emphase soit mise sur le Canada, la bibliographie comprend aussi certains ouvrages qui décrivent l'expérience d'autres pays dans le domaine des activités, de la science et des techniques liées aux glaces marines du nord.

Anon. Répertoire des experts des sciences de la mer au Canada - 1981. Publ. spéc. can. sci. halieut. aquat. 57. Ottawa, Ministère des Pêches et des Océans, 1981. 331 p.

(On peut se procurer cette publication en s'adressant au Secrétariat, Comité canadien d'océanographie, Ministère des Pêches et des Océans, 240, rue Sparks, Ottawa (Ontario), K1A 0E6.)

Ce répertoire est une liste des ingénieurs et spécialistes des sciences de la mer associés aux organismes gouvernementaux, universitaires et industriels et dont les activités sont orientées vers la recherche, le développement et les services de consultation. On y trouve aussi les noms d'experts en gestion et services scientifiques.



In an effort to provide an opportunity by which various related scientific disciplines may broaden their perspectives, an individual expert in a particular field of study is chosen to visit CMOS Centres and AES regions each year. Dr. René O. Ramseier, Head of the Ice Research and Development Unit of Ice Branch, has been nominated and accepted as tour speaker for the coming year. René, who in the past has authored and co-authored approximately fifty papers, is at present associated with the Canadian RADARSAT Program and is deeply involved in the field of remote sensing. During his trans-Canada tour, he will discuss the development of passive microwave remote sensing of sea ice from research phase to operations, as well as possible applications in meteorology, oceanography and hydrology. His preliminary schedule has him in the west in February and in the east in March. Deedee Davis, AES Downsview (667-4715), is arranging the tour.

Membership Renewals for 1983

Renewal notices will be mailed out just before Christmas. This year we are using pre-printed forms which each member should complete and return to the CMOS office by the first of March at the latest.

The membership list is being transferred to the computer at the CMOS office and starting in 1983, mailings will be handled from there. Please include your telephone number and Special Interest Group affiliation on the renewal form so that these can be entered into the new database.

There are a couple of supplemental questions on the renewal form. One concerns your language preference in dealing with the Society. Henceforth we will try to correspond with you in the official language of your choice.

The other question concerns distribution of the CMOS mailing list. The Society's policy is that the mailing list may be given to other organizations for the purpose of a single mailing if it is deemed by the Executive to be beneficial to the Society and its members. If you do not wish your name to be given out under this general policy, please tick the box on the renewal form and you will not be included on any mailing list distributed to outside agencies.

MERRY CHRISTMAS TO ONE AND ALL

John Falkingham
Corresponding Secretary

Affiliation - Renouvellement pour 1983

Les avis de renouvellement seront postés juste avant Noël. Nous emploierons cette année des formulaires que chaque membre devra compléter et retourner à SCMO pour le 1 mars au plus tard.

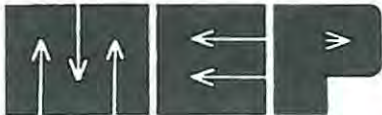
La liste des membres sera transférée à l'ordinateur de SCMO et, à partir de 1983, le service postal sera assuré par l'entremise de ce bureau. Prière d'inclure votre numéro de téléphone et toute affiliation d'intérêt sur la formule de renouvellement, ceci afin de s'assurer que ces renseignements soient inclus dans le nouveau puits de données.

Remarquez, sur la formule, qu'il y a une question concernant votre langue de communication avec la société. Dans l'avenir, SCMO s'efforcera de communiquer dans la langue de votre choix.

Une autre question touche à la liste de distribution postale de SCMO. La politique de la société veut que la liste de distribution postale puisse être donnée à d'autres organisations si votre exécutif pense que la société et ses membres puissent en tirer profit. Si vous ne désirez pas que votre nom soit donné conformément à cette procédure, vous n'avez qu'à cocher la case appropriée et vous n'apparaîtrez pas sur quelque liste que ce soit à l'exception de la nôtre.

JOYEUX NOEL A TOUS

John Falkingham
Secrétaire Correspondant



METEOROLOGISTS

MEP (Meteorological and Environmental Planning Limited) is a progressive privately owned consulting company specializing in the application of Meteorology and Oceanography for industrial use.

THE FORECAST OPERATIONS DIVISION of MEP has two positions available for meteorologists interested in specialized forecasting for agricultural, air pollution, aviation and marine activities.

1. DIRECTOR OPERATIONAL SERVICES -

To organize and supervise all forecast operations, client liaison, forecast applications development and business development. Salary Range 35K to 45K depending on experience and qualifications.

2. FORECASTERS -

To carry out forecasting duties in support of Operational requirements. Salary Range 25K to 35K depending on experience and qualifications.

Successful candidates should have comprehensive knowledge of synoptic meteorology and operational procedures as would normally be obtained from a government sponsored forecasting course. Additional in-house training in specialized areas will be available to successful candidates. An understanding of computer techniques would be an asset.

MEP offers excellent compensation and a comprehensive benefit package, as well as the opportunity to become personally involved with a rapidly growing meteorological consulting company.

ALL APPLICATIONS WILL BE HELD IN STRICT CONFIDENCE.

Interested persons are invited to submit a letter of application or phone (416) 661-5960 for additional information.

FORECAST OPERATIONS DIVISION
MEP COMPANY
850 MAGNETIC DRIVE
DOWNSVIEW, ONTARIO
M3J 2C4

NOTICE: It is expected that C.M.O.S. Newsletter advertising notes for the 1983 calendar year will be revised upward by approximately 30%.

CONTRIBUTORS TO NEWSLETTER MATERIAL

Articles submitted for printing in the Newsletter are requested typewritten on white bond paper single spaced with text arranged in 5.0 inch-wide columns (maximum outside line length) to facilitate photoreduction.

NEXT ISSUE: February, 1983

PRESS DEADLINE: February 15, 1982

RADAR METEOROLOGIST

The ALBERTA RESEARCH COUNCIL is a progressive multi-disciplinary Research and Development Organization. Our Atmospheric Sciences Department is currently seeking a Research Officer who will participate in an advanced research program on the use of multi-wavelength and polarization microwave techniques (weather radar) for remote identification of precipitation particle sizes and types. The techniques will be used to improve radar measurements of surface rainfall, hailfall and snowfall; and to interpret precipitation growth processes.

Ideally, candidates should possess an advanced degree in Atmospheric Sciences, Physics or Engineering. Previous experience in the interpretation of weather radar data is desirable.

Salary will be dependent on experience and qualifications. This competition will remain open until a suitable candidate is selected.

Please apply in writing, quoting Competition No. ARC - 597, to:

Human Resources Department
5th Floor, Terrace Plaza
4445 Calgary Trail South
EDMONTON, Alberta
CANADA
T6H 5R7



FOR SALE

KONDAR DOPPLER WIND SENSOR

MODEL 600

(XONTECH, INC. VAN NUYS, CALIFORNIA)

Complete with:

- One Xondar Model 600 wind sensor complete with keyboard, wind table printer, sounder option to provide mixing height data and electric snow melter in transmitter dish.
- The transmitter and two receivers are mounted on wooden pallets; metal framing is level adjustable; joints are multi-welded at stress points.
- Maintenance items include Computer Automations extender board for troubleshooting, spare transmitter-receiver circuit card, two spare preamplifier circuit cards, 457 m (1500 ft.) of standby cable, a B & K oscilloscope, several rolls of recording paper and operation manuals.

The entire unit is one year old having been put into operation in late 1981.

Asking Price - \$55,000. F.P.B. Calgary, Alberta

For further information please contact:

S.E. (Steff) Stephansson
Canstar Oil Sands Ltd.
#900, 605 - 5 Ave. S.W.,
Calgary, Alberta
(403) 262-8821





XVII CONGRÈS ANNUEL XVII ANNUAL CONGRESS



Theme: Day One Forecasting

Banff Springs Hotel · Banff, Alberta · May 3-5, 1983

CALL FOR PAPERS:

As stated in the last issue of the Newsletter, the deadline for accepting abstracts related to the 17th CMOS Congress theme or other aspects of meteorology and oceanography was set at December 15, 1982. This early date is required to enable the Scientific Committee to evaluate submissions and to allow ample time for preparing and printing of abstracts in the Congress issue of Atmosphere-Ocean. Because the lead time required becomes more firmly defined with time, there is usually some latitude remaining for the acceptance of late entries. Those who wish to submit abstracts after the published deadline are encouraged to do so and are asked to contact the Scientific Program Committee Chairman (Dr. Geof Austin) as soon as possible. His address and office phone number are as follows:

Radar Weather Observatory
Macdonald College Post Office
Montreal, Quebec
H9X 1C0
(514) 457-6319

Considerable progress has been made in developing a program for the CMOS Congress to be held in Banff next May. The workshop on Day 1 - Forecasting - will have sessions moderated by internationally well-known scientists on the following topics:

1. Image Processing Techniques.
2. Extrapolation Forecasting Schemes.
3. Short Range Numerical Models.
4. Data Collection and Assimilation Techniques.
5. Complete Forecasting Systems and Statistical Problems.
6. Dissemination and Communication Problems.
7. Operational and Forecaster Training Aspects of Nowcasting.
8. Panel Discussion on all aspects of Day 1 Forecasting.

Papers on all aspects of this topic are solicited. Papers on operational as well as training and communications problems are particularly sought. The second theme of the conference is the Remote Sensing of Sea Ice.

INVITED SPEAKERS

The following guest speakers have been invited to participate in various sessions:

D. Berran
PROFS, NOAA
Boulder, Colorado

M. Garstang
University of Virginia

K. Browning
British Meteorological Office (or alternate)

S. Bodin
Swedish Meteorological Service
Sweden's WMO Delegate

CONGRESS THEME

The Congress theme is "Day-One Forecasting", although sessions will be held on many other aspects of meteorology depending upon the papers submitted. Invited speakers will attend from several countries outside Canada. Poster sessions and commercial exhibits are also planned.

Pre-registrations will be accepted until March 15, 1983. The 1983 fees are \$71.00 for members, \$91.00 for non-members, and \$10.00 for students. The registration fee includes tickets to the wine and cheese party and to the banquet (students excepted). Additional tickets will be available at the registration desk. Delegates registering after March 15 will be charged an additional \$15.00. A reduced rate of \$45.00 is available to retired members who pre-register.

SOCIAL FUNCTIONS

A wine and cheese icebreaker is planned for the evening of Monday, May 2, and the annual banquet is scheduled for Wednesday, May 4. This year's banquet speaker will be Mr. Andy Russell, a well known Alberta author and environmentalist.

Special outings to various points of interest (such as the hot springs, Sunshine Ski Village, etc.) are being organized for interested attendees and spouses.

ACCOMMODATION

Accommodation for Congress attendees has been arranged with the Banff Springs Hotel under the special American Plan. This plan includes your room, three meals per day, and all gratuities for \$82.00 per night single or \$57.00 each double. A third person may stay in the room for \$50.00. There is no additional room charge for children under 14, and they may have their meals at half price. The plan takes effect with the evening meal (6:00 p.m.) on Monday, May 2, and concludes with lunch on May 5. In order to be guaranteed accommodation under this plan, you must pre-register and enclose one night's deposit.

FACILITIES: Banff Springs Hotel, May 1 - 5, 1983.

Meeting rooms reserved

May 2 - Curio Foyer for Registration/Information; plus 6 small rooms for committee meetings - Frontenac (seats 70 theatre style for Council), Victoria, Lacombe, Empress, Duchess, and Princess Rooms. Riverview Lounge for Wine and Cheese.

May 3 - Curio Foyer; Ballroom for Plenary Session, Regular Session and Exhibits (seats 750 theatre (t) style or 250 classroom (c) style); Riverview Lounge (200 t, 100 c); Champlain (80 t); Oak (80 t, 40 c); and Angus (60 t).

May 4 - Ballroom + Conservatory (for Poster session); Alhambra Dining Room (for sessions, also Awards Banquet); Angus; Oak; and Champlain.

May 5 - Alhambra; Champlain; Oak; and Angus.

LOCAL ARRANGEMENTS COMMITTEE

for 17th Annual CMOS Congress; May 2 - 5, 1983

Chairman: Dr. John M. Powell
Northern Forest Research Centre
5320 - 122 Street
Edmonton, Alberta T6H 3H5
Bus: 435-7210 (7333); Res: 435-7006

Secretary/Publicity: Karen Finstad (Bus: 432-4498)
and
Leslie Stovel (Bus: 432-5624)
Meteorology Division
Department of Geography
University of Alberta
Edmonton, Alberta T6G 2H4

Treasurer/Registration: Tom Medlicott
Alberta Weather Centre
6325 - 103 Street
Edmonton, Alberta T5H 5H6
Bus: 438-4358; Res: 462-1741

Facilities Convenor: Frank Robitaille
Atmospheric Sciences Division
Alberta Research Council
Terrace Plaza
4445 Calgary Trail, South
Edmonton, Alberta T6H 5C3
Bus: 438-1777; Res: 458-2721

Social Convenor: Neil Parker
Arctic Weather Centre
6325 - 103 Street
Edmonton, Alberta T6H 5H6
Bus: 438-4353; Res: 467-2410

Exhibits Convenor: Ed Hudson
Beaufort Weather Office
6325 - 103 Street
Edmonton, Alberta T6H 5H6
Bus: 438-4357; Res: 435-8586

Scientific Program Committee Liaison: John Powell or Frank Robitaille

Alberta Centre Liaison: Chris Sackiw, Chairman
Alberta Centre
Atmospheric Sciences Division
Alberta Research Council
Terrace Plaza
4445 Calgary Trail, South
Edmonton, Alberta T6H 5C3
Bus: 438-1777; Res: 474-7864

TRANSPORTATION

The town of Banff is located 135 km west of the Calgary International Airport. Transportation between Calgary and Banff is available by train, bus and car. Brewster Greyline operates buses between the Calgary airport and the Banff Springs Hotel, while Greyhound operates buses between downtown Calgary and downtown Banff. The regular airport bus to downtown Calgary stops across the street from the Greyhound depot.

Following the Congress, special buses from the hotel to the airport may be arranged according to the demand. Please indicate your interest at the registration desk.

The latest information regarding schedules is as follows (times subject to change):

Brewster Greyline Fare: \$17.00 one-way

Depart Calgary Airport	Arrive Banff Springs	Depart Banff Springs	Arrive Calgary Airport
1400	1610	0700	0930
1845	2055	0910	1130

Greyhound

Depart Downtown Calgary	Arrive Downtown Banff	Depart Downtown Banff	Arrive Downtown Calgary
0730	0945	0425	0640
1230	1445	0845	1100
1830	2045	1525	1740
2230	0045	1730	1945
0115	0330	2220	0035

Fare: \$7.05 one-way

Via Rail Fare: \$11.00 one-way

Depart Calgary	Arrive Banff	Depart Banff	Arrive Calgary
1030	1240	1835	2040

Please return (before March 15, 1983) your completed application to:

CMOS
1155 - 75th Street
Edmonton, Alberta
T6K 2S4

Make cheque (registration and room deposit) payable to CMOS.

HOTEL REGISTRATION FORM

Banff Springs Hotel
Banff, Alberta

Name: _____
Address: _____
City: _____ Prov: _____ Code: _____
Arrival Date: _____ Departure: _____
Sharing Room With: _____
No. in Party: _____ First Night Deposit: _____
(please circle below)
Single \$82.00 Double \$57.00 Third Occupant \$50.00
Children under 14 free

CONGRESS REGISTRATION FORM

Canadian Meteorological and Oceanographic Society
XVII Annual Congress

Name: _____
Address: _____
City: _____ Prov: _____ Code: _____
Phone No: _____ Ext: _____
Registration Fee: _____ Date: _____
(please circle below)
Member \$71.00 Retired \$45.00 Non-Member \$91.00 Student \$10.00 Late Fee \$15.00

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151 Slater St.
Ottawa, Ontario, Canada
K1P 5H3

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