



Canadian Meteorological  
and Oceanographic  
Society

La Société Canadienne  
de Météorologie et  
d'Océanographie

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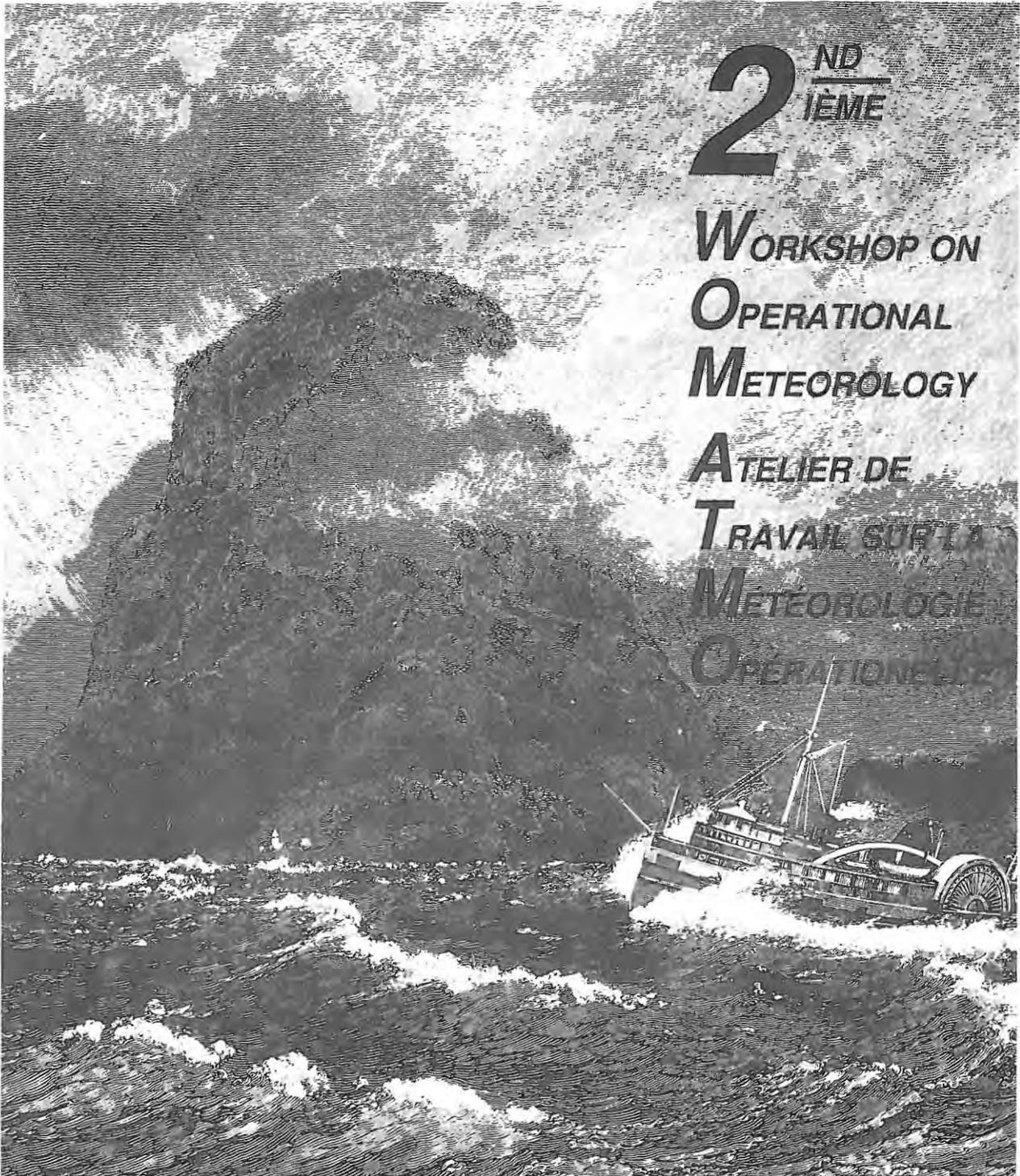
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Atmospheric Environment Service  
Service de l'environnement  
atmosphérique



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



**2<sup>ND</sup>  
IÈME**

**WORKSHOP ON  
OPERATIONAL  
METEOROLOGY**

**ATELIER DE  
TRAVAIL SUR LA  
MÉTÉOROLOGIE  
OPÉRATIONNELLE**

**HALIFAX • NOVA SCOTIA • OCT 14-16 • 1987**

## CALL FOR PAPERS

22nd CMOS ANNUAL CONGRESS  
7-10 JUNE, 1987  
Hamilton, Ontario, Canada.

The 22nd CMOS Annual Congress will be held 7-10 June, 1987 in Hamilton Ontario. The Toronto Centre of the CMOS will host the Congress.

The theme is Severe Weather and Its Impact. Theme sessions will include (a) detection techniques, observational studies and numerical simulations; (b) forecasting, climatology and assessment and damage control; (c) effects on waves, currents, and surges. General sessions will include limnology of large lakes, CASP, and atmospheric chemistry. Contributions are sought on these topics and any other topic in meteorology and oceanography. Poster sessions may be held and there may need to be some restriction on the number of papers presented at the Congress.

Abstracts, not to exceed 300 words, should be sent in by 1 February, 1988 to Dr. Ronald E. Stewart, Cloud Physics Research Division, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario. M3H-5T4, (tel:416-667-4688). Please also indicate if you wish to present your paper orally or in a poster session.

Each abstract is to be typed single spaced on a sheet of 216 mm by 279 mm (8.5 inches by 11 inches) paper with 25 mm (1 inch) margins. Clean, camera-ready copy with black type is required. Elite type (12 pitch) is preferred. The heading block should consist of the following items on successive lines: a) the title in capital letters, b) the name(s) of the author(s) in upper and lower case letters. There should be a one-line space between the heading block and text. All lines, including the title, names and text, are to be left justified.

Commercial exhibits will be on display during the Congress and there will be an extensive spousal programme. For information on exhibits please contact the Exhibits Co-ordinator (R. Saunders, tel: 416-667-403) and for information on all other aspects of the Congress please contact the Chairman of the Local Arrangements Committee (C. McLeod, tel: 416-667-4811). Both of these contacts are also at the Atmospheric Environment Service, Downsview.

Dr. Rod Shaw of the Atlantic Marine Meteorology Group in the B.I.O., Dartmouth, N.S., who had been installed by the Annual General Meeting as our President for 1987/1988 has been forced to resign because he has been appointed to head a project on acid rain research in the International Institute for Applied Systems Analysis in Vienna, Austria. We are sorry to lose him, but wish him success in his interesting and prestigious task. We also thank him for having carried out his duties conscientiously to just about the last day before his departure.

The Council has appointed Dr. S. D. Smith, also of B. I. O. Dartmouth, N. S. as his replacement. As members will remember, Dr. Smith was President for the 1985/1986 term and we are grateful that he consented to serve again at short notice. His profile appeared in the July 1985 issue of the Newsletter.

#### Thanks to the Organizers of the 1987 Congress

I am sure that all CMOS members will join with me in saying "well done" to the Local Arrangements Committee and the Program Committee for the excellent job that they did in organizing this year's Congress. The combination of a well-balanced technical program and smooth-running physical arrangements (including the weather, of course) was a credit to CMOS and especially the Newfoundland Centre.

Rod Shaw  
President

#### NEW CMOS LIFE MEMBERS

CMOS is pleased to announce that due to their many years of continuing support to the goals of CMOS, the following Canadian scientists have been made life time CMOS members.

Dr. Neil Campbell  
Dr. Phil Merilees  
Dr. C. Mann

#### Membership/subscription receipts and reminders

The computer difficulties experienced by our host Society (CAP) continued unfortunately longer than anticipated. However, by the time this issue reaches members they should have been resolved and the long delayed receipts and reminders should have been mailed out. We apologize for these delays.

#### Membership/subscription forms

We also apologize for the inadvertent omission of the membership application and subscription order form from the last (June 1987) issue of the Newsletter. It is included in this issue and gives the 1988 fees which show a few, generally small, increases found necessary by the Annual General Meeting to meet rising costs. The membership fee goes up from \$25 to \$30, its first increase in three years (student fees have not been increased). Those who have still not renewed their membership/subscriptions are invited to do so now.

#### Accreditation of Consultants

The Annual General Meeting has been informed of the names of the first list of CMOS accredited consultants. The list is published in this issue. Those considering applying for accreditation are reminded that the deadline for receipts of applicants for 1987 is September 1. All applications received after that date will be included among those expected to be processed by May 1, 1988.

## 21 st Annual CMOS Congress, St John's Newfoundland

*Local Arrangements Committee, Chairmans Report: Brian Sanderson.*

In October 1986 a committee decision was arrived at. We boldly predicted "where" no person has predicted before: that the weather was going to be sunny and warm from 16 to 19 June 1987 in historic St John's, Newfoundland. As a consequence more than 230 delegates met at Memorial University during a typically pleasant interlude commonly referred to as the Newfoundland summer. Scientific sessions focused upon a theme of "PREDICTABILITY IN THE ATMOSPHERE AND IN THE OCEAN" and attracted media coverage by television, radio, and newspapers. Delegates attending the conference reflected the broad range of the theme. As well as the traditional ensemble of physical oceanographers and meteorologists there was strong representation in allied fields of applied oceanography, biological oceanography, marine geochemistry, and paleo-oceanography. Hopefully such affiliations will continue to be fostered to the advantage of all concerned.

No report would be complete without mention of the meritorious performances at various social events. In spite of the best efforts of all concerned we remained within budget for the Ice Breaker. Steve Calvert instigated a U.B.C. Oceanography Alumni Cocktail Hour on Wednesday evening, and the stately mood that prevailed at the Annual General Meeting can be, at least in part, attributed to this warm-up event. At the annual banquet Paul LeBlond was seen biting the head off a cod: an improvisation on the usual screech-in ceremony. Not to be outdone Lawrence Mysak danced a jig to a tune by The Fiddlers Five; and so the tone was set for the rest of the evening, which ended at 3 am in some hazily remembered downtown bar.

Three tours were scheduled for the Friday afternoon. About fifty delegates took the oppor-

tunity to peruse the facilities of the Institute of Marine Dynamics. Next time we will supply surfboards with the towing/wave tank. Most of the above group went on to a tour of Northwest Atlantic Fisheries Centre, culminating in yet another reception with free booze. Forty-three lucky delegates took the opportunity to go on the Bird Island Tour. As well as the usual Puffins, Murre's, and other feathered beasts we were treated to an a close-up viewing of Humpback whales gorging themselves on schools of capelin. A hearty bowl of pea soup was not wasted on anyone during the voyage back, regardless of the lumpy sea.

As a society we have a responsibility to foster the development of new expertise in meteorology and oceanography. This year we sponsored 4 graduate students. The sponsorship was limited to payment of airfares but future LAC's might consider extending their support to include other expenses. In all 11 students applied for travel support and a draw was held to choose one student from each coast and two from central Canada. The students sponsored were: Sylvie Gravel (McGill), Andrew Giles (McGill), Bon von Hardenberg (UBC) and David Brickman (Dalhousie).

Air Canada Convention Central provided an important component of our student sponsorship programme. For every thirty delegates who book through Air Canada Convention Central the congress gets one free return airfare. The previous congress at Regina handed one of these on to us which we used to sponsor a student. We will be handing on at least two free tickets to next year's congress organizers. In all more than ninety people registered through Air Canada Convention Central for the 1987 congress. Delegates who make their travel arrangements in this way get the benefits of low prices, convenient arrangements, and support the society. I encourage all delegates to take this option for travel to future congresses.

In conclusion I wish to thank the members of the Local Arrangements Committee: Savi Narayanan, Richard Greatbatch, Stu Porter, Doug Kinsella, Jocelyn Richard, Jocelyne Hellou, and Adrian Walsh. To them must go credit for a job well done. I also thank Colin Banfield, Alex Hay, Ian Webster, and especially John Barron, who although not officially on the LAC, helped troubleshoot at meetings and assisted with arrangements.

## 21st Annual Congress, St. John's

*Scientific Program Committee, Chairman's Report: Alex Hay*

Galileo reportedly said: " The Bible shows the way to Heaven, not the way the heavens go ". Regardless of whether Galileo actually made the statement or not, it makes this Report more interesting. It has little relation to the CMOS '87 Congress, except that the Congress had something to do with celestial machinery, and nothing whatsoever to do with gaining access to the Pearly Gates. Some might disagree, thinking I suppose that delegates may have greater difficulty with Saint Peter as a result of their visit to St. John's, but this is the fault of the Local Arrangements Committee.

The theme of the Congress was "Predictability in the Atmosphere and the Ocean". It was chosen because we felt that ultimately Prediction is the goal underlying all of our research, and because of the major questions we face concerning the long-term effects of perturbations to the planet's atmosphere and oceans. Two Plenary Sessions were dedicated to the theme. These sessions were addressed by E. Lorenz (MIT), A. Robinson (Harvard) and H. Hengveld (Canadian Climate Centre). R. W. Stewart (then of the Alberta Research Council) had planned to give an address as well, but due to ill health was unable to attend. We extend to Bob our best wishes for a rapid recovery. The remainder of the Programme dealt less directly with the theme, although many of the contributed papers were thematic in content. Of special note in this respect were the keynote addresses made by the other invited speakers: M. Bowman (SUNY), K. Bryan (Princeton), J. Lynch (WHOI), J. Mauchline (Dunstaffnage Marine Research Lab), L. Mysak (McGill), and J. Nriagu (NWRI).

The Programme Committee made several decisions with important consequences.

(1). We chose many non-Canadian invited speakers, in order to encourage international participation in our Society and to hear the view from the outside. This decision apparently appealed to the NSERC Selection Committee.

(2). We had, for the first time at a CMOS Congress, sessions in Biological Oceanography. We now have the potential for a Society which can truly embrace the interests of physical, chemical, geological and biological ocean scientists and engineers, and their meteorological counterparts. This is an important step forward and one which I hope will continue to be fostered.

(3). It was decided the Programme with Abstracts should once again be a glossy-covered, professional document in spite of the cost (6300 dollars for 1500 copies), because we ourselves felt that the cheaper versions at previous Congresses did not make a favourable impression on delegates and were unlikely to be retained for any length of time after the Congress.

(4). We ran 4 parallel sessions and short (15 min) talks. We felt that fifteen minutes was enough time to present one's main ideas, and meant necessarily more ideas per unit time and therefore a more stimulating Congress. I have to apologize to those speakers who anticipated the usual 20 min presentations: you were to have been notified when the preliminary programme was sent. This was our oversight.

I have several recommendations which I think would ease the burden on future Programme Committees, and in some cases would cut costs: (1). The Society should adopt a standard form a la AGU for abstracts. We had to retype 20 to 30% of the abstracts submitted. Furthermore, if we had chosen a narrower abstract format, the abstracts could have been arranged in double columns in the Programme which then would have been printed at half the cost. (2). The Society should adopt a standard form for the Poster advertising the Congress, and included on this Poster should be the standard abstract format. This would eliminate a major source of non-standard abstracts, would help to ensure that the Poster gets out early, and would give the Society's Congresses a better defined identity internationally. (3). The Society's membership list with addresses should be available on PC-compatible diskettes.

I would like to thank everyone who contributed papers or posters. They were the key ingredient in making the Congress a success. I also thank the Session Chairpersons for keeping speakers to time, a vital task when running many parallel sessions. I especially thank the members of the Programme Committee for their assistance and advice: John Anderson, Colin Banfield, Michel Beland, Richard Haedrich, Steve Macko, and Ian Webster. Finally, I would like to thank Brian Sanderson, who deserves accolades from us all for his unstinting efforts.

CANADIAN METEOROLOGICAL  
AND  
OCEANOGRAPHIC SOCIETY  
SPONSORS AWARDS AT 26TH ANNUAL  
CANADA - WIDE SCIENCE FAIR

Receiving recognition for hard work is encouraging: it rewards past efforts, and inspires those of the future. The Canadian Meteorological and Oceanographic Society, by sponsoring awards at the recent 26th annual Canada-Wide Science Fair, has given such encouragement to five students studying, of course, weather and oceans!



Susan and Patrick Surry's project, "Weather-Statistically Speaking", earned them a \$100 cash award from CMOS. The siblings, both students from London, Ontario, investigated the accuracy of Environment Canada's weather predictions for the London area, compared to forecasts prepared using their own statistical methods. Evelyn Wilson, CMOS Toronto Centre Chairperson, is shown making the award on behalf of CMOS.

The pair studied the winter of 1985 - 86 in great detail, gathering daily measurements and comparing them with the four forecasts published daily by Environment Canada (daily, next-day, and two and three day predictions). They concluded, on the basis of these comparisons, that forecasters generally do a good job of predicting short term weather (within one or two days), but experience difficulty with the prediction of longer term forecasts. They are presently continuing their investigations.

Paul Winterhalder, a grade 11 student from Souris, P.R.I., received an Honourable Mention and a one year subscription to "Chinook" for his project, "Weather Witch".



Winterhalder designed an interactive computer program called "Weather Witch" that uses frontal weather systems and convectional rainfall patterns to predict the weather up to 36 hours in advance. The system predicts weather by analysing the present barometric pressure, wind direction, wind speed, temperature, and cloud cover. The program is also able to determine if a particular weather system is advancing or retreating, and can estimate where in the system the user will be for the next 36 hours.

Mathew Kaustinen, a grade 13 student from Oakville, Ontario, received a \$100 cash award and one year subscription to "Chinook" for his project, "Waves: Power From an Old Source". Shown making the award on behalf of CMOS is Evelyn Wilson, Toronto Centre Chairperson.



Kaustinen, 18, attempted to find a practical method of generating electricity from water waves. He built a generator called "WATOR II", which he tested in Lake Ontario and at the Canada Centre for Inland Waters. Although his research is not yet complete, Kaustinen states, "The WATOR II has already proven to be a practical alternative to our present energy generating techniques."

Jeannine Boulet's project, "The Hydrological Cycle", earned her an Honourable Mention from CMOS. Boulet, a 14 year old student from Dunrea, Manitoba, attempted to reproduce and measure the physical aspects of the hydrological cycle using an aquarium for simulation purposes. She observed the effects of the sun, the temperature of the upper atmosphere, and the depth and temperature of oceans and lakes on the hydrological cycle. She discovered that each of these factors seemed to affect the cycle in at least one way, and some affected it more than others.



The 1987 Canada-Wide Science Fair, held May 10-17 in Mississauga, Ontario, was the final stage of competition for 400 students representing 76 regions across Canada. Having participated in science fairs at the local and regional levels, these aspiring young scientists gathered to compete nationally for over \$60,000 in cash, awards, and scholarships.

Each year, the Fair is sponsored by the Youth Science Foundation - a national, non-profit organization funded by federal government grants, and individual and corporate donations.

Cynthia Gardiner Evans  
Communications Officer  
Youth Science Foundation

#### CMOS Prizes and Awards 1986

CMOS is proud to announce the recipients of the 1986 CMOS prizes and awards.

President's Prize	Dr. David Farmer
Andrew Thomson Prize	Dr. Norman MacFarlane
Rube Hornstein Prize	Mr. John O'Reilly
J.P. Tully Medal	Professor George Pickard
Graduate Student Prize	Dr. Louis Garand
Citation	Environment Protection Service, Atlantic Region
Prize in Applied Oceanography	No nominations received

#### FIRST LIST OF CMOS ACCREDITED CONSULTANTS

Congratulations to the first CMOS Accredited Consultants! Their names are listed below.

Dr. Noel Boston  
Dr. Antony J. Bowen  
Dr. Han-Ru-Cho  
Dr. David R. Hudak  
Ms. Susan K. Lally  
Dr. Tom B. Low  
Dr. John Maybank  
Dr. Philip E. Merilees  
Mr. Ian J. Miller  
Dr. T.R. Oke  
Dr. G. Steyn  
Mr Brian W. Wannamaker  
Dr. Boris Weisman

#### NEW CMOS MEMBERS

The following new members were approved at the Council meeting of 16 June 1987.

NAME	CENTRE
Mr. R. Jacobs (regular member)	Saskatchewan
Ms. Joan Masterton (regular member)	Toronto
Mr. R. A. Miller (regular member)	Toronto

Mr. Franklin B. Schwing (student member)	Halifax
Mr. Peter Bartello (student member)	Montreal
Mr. Charles P. Bourque (student member)	Fredericton
Prof. B. d'Anglejan (regular member)	Montreal
Mr. Charles McLandress (student member)	Montreal

#### APPLICANTS INVITED

POSITION: Director of Publications  
Canadian Meteorological and  
Oceanographic Society (CMOS)

DUTIES: CMOS has four high-quality publications: two scientific journals (Atmosphere-Ocean and the Climatological Bulletin), a popular magazine (Chinook) and a Newsletter.

The Director of Publications provides a crucial linkage between the editors and the printers of the CMOS publications including setting production scheduling and costs, quantities to be printed, and mailing.

The Director also manages the advertising carried in two of the publications, assists in the promotion of journals, and provides financial information for budgeting and grant applications.

COMPENSATION: This position is primarily a volunteer one but an honorarium of up to \$2500 will be considered. The primary reward will be satisfaction in carrying out an important function for CMOS and in gaining business experience.

LOCATION: Since the printing is mainly carried out in Toronto, applicants from southern Ontario would be preferred. However, applications from other areas are welcome. Compensation for telephone expenses and some limited travel can be paid.

#### FOR FURTHER DETAILS, PLEASE CONTACT:

Dr. Stuart Smith  
Bedford Institute of Oceanography  
P.O. Box 1006  
Dartmouth, Nova Scotia  
B2Y 4A2  
Bus: (902) 426-2558

or  
Mr. Uri Schwartz  
Suite 903,151 Slater Street  
Ottawa, Ontario  
K1P 5H3  
Bus: (613) 990-0300  
Res: (613) 829-5512



# OMNI



## OPERATIONAL METEOROLOGY NEWS AND INFORMATION

**AES/CMOS**  
**2nd WORKSHOP ON OPERATIONAL METEOROLOGY**  
**HALIFAX, NOVA SCOTIA**  
October 14 - 16, 1987

### PROGRAM

The program for the Second Workshop on Operational Meteorology is nearly finalized at this time. The theme speakers have confirmed their presence and each submitted a paper. Coming are: Dr. Fred Sanders, Professor Emeritus M.I.T.; Dr. Ron Stewart, AES Cloud Physics; Cmdr. Ken Lilly, NOAA/NWS; and Dr. Mel Shapiro, NOAA/NCAR.

The preprint volume is currently being prepared for printing, with 46 papers included. The Program Committee is very pleased with the quality of papers to be presented at the workshop, and included in the preprints. In addition, the Local Arrangements Committee is overwhelmed by the registration response to date.

Over 100 registrations had been confirmed by the end of August. We hope that the enthusiasm by all will carry on throughout the workshop, during the "formal" sessions and by informal interaction between individuals keen on the science of operational meteorology.

Jim Abraham  
Program Chairman

### VENUE

The workshop will be held at the Chateau Halifax Hotel in downtown Halifax. Halifax is a historic maritime city full of attractions for visitors. Delicious east coast lobster, fish chowder and maritime hospitality are unforgettable.

### TRANSPORTATION

Halifax is served by air, rail and highway links to most North American cities. The airport is located approximately 30 km from downtown Halifax. A bus service, available just outside the arrivals area door, will take you to the Chateau Halifax and other downtown hotels. The bus fare is \$8.00 per person. Alternatively, taxis are available for a flat rate of about \$25 and car rentals are available at the airport.

Air Canada is the official airline for the workshop. By making your reservations through the Air Canada Convention Central (1-800-361-7585), you will be eligible for at least 20% off regular fares. The discount can be obtained only if you or your travel agent make the reservation through Convention Central. See reprint of pamphlet for additional details.

### ACCOMMODATION

All sessions will take place in the Chateau Halifax. A block of rooms has been arranged for workshop participants at the special rate of \$55 (single). Hotel reservations are the responsibility of the participant. To obtain the preferred rate be sure to mention the workshop when making your reservations, or mail the reservation form below directly to the hotel.

### SOCIAL PROGRAM

Her Honour, Mrs. Alan Abraham, wife of the Lieutenant-Governor of Nova Scotia, will host a spousal coffee at Government House on Wednesday morning, October 14. Transportation will be provided if necessary.

On Wednesday afternoon, October 14, a tour of the Bedford Institute of Oceanography is planned. This facility is the centre for oceanographic research on the East Coast of Canada. Transportation will leave the Chateau Halifax at approximately 1500 and the tour will last about 2 hours. Tours of the Maritimes Weather Centre in Bedford and the METOC centre (Canadian Forces meteorological-oceanographic centre) are also tentatively being planned. Please inform the LAC of your interest or preferences.

An icebreaker will be held in the Bluenose Room atop Chateau Halifax from 7:00 to 10:00 pm on Wednesday, October 14. A Poster/Demonstration Session will be held concurrently which will include A/V demonstrations by several participants. A cash bar will be available.

On Thursday evening, October 15, the Banquet will be held in the Bluenose Room where the view of Halifax Harbour is both expansive and breathtaking. Many distinguished guests are expected to attend. Famed speaker and comedian General John Cabot Trail will be guest speaker. Price of the banquet is \$17. Tickets are available by mail and at the registration desk (subject to availability). Cocktails will be served at 6:30 pm and the banquet begins at 7:30.

The Chateau Halifax is located within easy walking distance of many Halifax tourist sites, including Citadel Hill and Historic Properties. Tours available include a Halifax Water Tour which leaves Historic Properties for a 2 hour harbour tour at \$9.75 per person. Suggestions and guidance will be available at the registration desk for those wishing to visit historic, cultural or natural attractions in the city or province.

### REGISTRATION

The registration fee is \$75 (Can) for CMOS members and \$100 (Can) for non-members. Approved delegates from AES and Canadian Forces Weather Service (CFWS) will have their fee prepaid by their employer. All participants must complete and return the registration form below. Registration may be limited so interested persons are encouraged to register as soon as possible.

The cost of the banquet ticket (\$17) is not included in the registration fee. Banquet tickets are now being offered with confirmation of registration and at the registration desk.

Your registration kit, including pre-print volume, may be picked up at the registration desk on arrival in Halifax. Hours and location of the registration desk are indicated in the Synopsis of Sessions.

Please send completed registration form and payment (if applicable) to:

CMOS OPMET Workshop  
c/o Maritimes Weather Centre  
1496 Bedford Hwy  
BEDFORD, Nova Scotia  
Canada, B4A 1E5

Make cheques payable to CMOS OPMET Workshop.

#### ACKNOWLEDGEMENTS

The organizing committee is grateful for the support of:

Air Canada  
Province of Nova Scotia  
Atmospheric Environment Service

#### LOCAL ARRANGEMENTS COMMITTEE

Chairman  
Ken Macdonald  
OPMET WORKSHOP  
c/o Maritimes Weather Centre  
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(902) 426-9182

Secretary  
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Peter Bowyer  
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Publicity/Publications  
William Richards  
(902) 426-9135

Social/Facilities Convener  
Gary Lines  
(902) 427-6385

Registration Convener  
Steve Miller  
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#### PROGRAM COMMITTEE

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Lou Legal  
Winnipeg (204) 949-4513

Laurie Wilson  
Toronto (416) 667-4811

#### SYNOPSIS OF SESSIONS

The following summary contains titles, dates and times of sessions only. For more detail please consult the program which was published in the June issue of this Newsletter.

##### Tuesday, October 13, 1987

1900 Registration in Lobby, Chateau Halifax

##### Wednesday, October 14, 1987

0730 Registration in Baronet Lobby  
0830 THEME SPEAKER SESSION - I  
1100 SESSION 1 CYCLOGENESIS  
1330 SESSION 2A - MARINE METEOROLOGY  
1330 SESSION 2B - ANALYSIS AND FORECASTING  
TECHNIQUES - I  
1500 TRIP TO BIO/MWC/METOC (TENTATIVE)  
1520 LABORATORY SESSION - 1  
1900 POSTER/DEMONSTRATION SESSION AND ICEBREAKER  
IN BLUENOSE ROOM

##### Thursday, October 15, 1987

0830 LABORATORY SESSION - 2  
1100 SESSION 3A - ANALYSIS AND FORECASTING  
TECHNIQUES - II  
1100 SESSION 3B - DISPLAY SYSTEMS  
1100 SESSION 3C - DATA ACQUISITION  
1330 LABORATORY SESSION - 3  
1600 SESSION 4A - STATISTICAL PRODUCTS  
1600 SESSION 4B - ANALYSIS AND FORECASTING  
TECHNIQUES - III  
1600 SESSION 4C - MODEL PERFORMANCE  
1830 BANQUET IN BLUENOSE ROOM

##### Friday, October 16, 1987

0830 THEME SPEAKER SESSION - II  
1030 SESSION 5 - MARINE DATA ACQUISITION  
1300 SPECIAL SESSION - USERS AND PROVIDERS OF  
MARINE WEATHER SERVICES  
1530 CONCLUDING REMARKS







**Chateau Halifax**

1990 Barrington Street, Scotia Square  
Halifax, Nova Scotia B3J 1P2  
Telephone (902) 425-6700 • Telex 019-22661

PLEASE COMPLETE AND  
RETURN DIRECTLY TO HOTEL

Chateau Halifax is located at Scotia Square in the heart of downtown Halifax, within close proximity of Historic Properties, water tours, Citadel Hill and many other points of interest. Scotia Square, featuring over 100 shops and services is accessible from our main lobby.

CANADIAN METEOROLOGICAL & OCEANOGRAPHIC SOCIETY  
October 13 - 16, 1987

NAME \_\_\_\_\_

ADDRESS \_\_\_\_\_

CITY \_\_\_\_\_

PROVINCE \_\_\_\_\_

POSTAL CODE \_\_\_\_\_

ARRIVAL

DATE: \_\_\_\_\_

TIME: \_\_\_\_\_

Day

Month

Year

DEPARTURE DATE \_\_\_\_\_

CHECK OUT TIME IS 1:00 PM

PLEASE RESERVE

SINGLE ROOM \$55.00  
(One Person)

DOUBLE ROOM \$65.00  
(Two Persons)

RESERVATIONS ARE HELD ONLY UNTIL 6:00 PM UNLESS GUARANTEED BY ADVANCE DEPOSIT OR CREDIT CARD.

Diners Club/Carte Blanche/Visa/Master Card  
Master Charge/American Express/Enroute/JCB Card

ENCLOSED IS A ONE NIGHT'S DEPOSIT TO GUARANTEE RESERVATION.

PLEASE GUARANTEE MY RESERVATION TO MY CREDIT CARD.

Card Name \_\_\_\_\_

Card Number \_\_\_\_\_

Expiry Date \_\_\_\_\_

Signature \_\_\_\_\_

THANK YOU!  
WE LOOK FORWARD TO WELCOMING YOU TO CHATEAU HALIFAX

CANADIAN PACIFIC HOTELS CORPORATION

**2nd WORKSHOP ON  
OPERATIONAL METEOROLOGY**  
October 14 to 16, 1987  
Halifax

## IT'S OFFICIAL

Your meeting is registered with Convention Central, Air Canada's exclusive reservations service for convention delegates. Benefits include:

### CONVENTION FARE\*

Save at least 20% with our new Convention Fare, available only through Convention Central. Should you qualify for other fares that represent greater savings, your reservations will be confirmed at the lowest available.

### CAR RENTAL

If you like the convenience of a car when you arrive, Air Canada has arranged an attractive convention rate with Tilden. The savings are substantial, and available only through Convention Central.



### HERE'S ALL YOU DO

Call our toll-free number, identify yourself and your meeting, and our convention specialists will do the rest. If you customarily use a corporate travel department, or travel agent, have them call on your behalf. They can obtain the same benefits for you.

**Call "Canada's #1 convention airline"... weekdays 9:00 a.m. to 8:00 p.m. EDT/EST**

\*Certain advance purchase conditions apply

**AIR CANADA  
CONVENTION CENTRAL**



**2ième ATELIER DE TRAVAIL SUR LA  
MÉTÉOROLOGIE OPÉRATIONELLE**  
Du 14 au 16 octobre, 1987  
Halifax

## C'EST OFFICIEL

Votre réunion a été enregistrée à notre Centrale de Congrès, un bureau de réservations exclusif d'Air Canada au service des délégués de congrès. Les avantages sont les suivants:

### TARIF DE CONGRÈS\*

Notre tarif vous permet d'économiser au moins 20%. Il ne vous est offert qu'à la Centrale de Congrès. Si vous êtes admissible à d'autres tarifs plus économiques, vos réservations seront effectuées au tarif le plus avantageux pour vous.

### LOCATION DE VOITURE

Si vous désirez une voiture dès votre arrivée, Air Canada a conclu une entente avec Tilden qui vous permettra de réaliser des économies substantielles. Ce tarif intéressant n'est offert aux délégués qu'à la Centrale de Congrès.



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**CENTRALE DE CONGRÈS  
AIR CANADA**



## CALL FOR PAPERS

### 2nd International Conference on Atmospheric Sciences and Applications to Air Quality

#### PLACE AND DATE:

Science Council of Japan

Minato-ku, Roppongi 7-22-34, Tokyo 106, Japan

October 3-7, 1988

\* (CMOS is a co-sponsor of this conference.)

#### Background and Purpose of the Conference

To present and to discuss current research on the air environment and to promote atmospheric sciences and clear air in the Pacific Rim. As a consequence of rapid industrial development and urbanization in the Pacific rim areas, the protection of urban dwellers from air pollution becomes an urgent problem. In addition, air pollutants do not respect either geographical or political boundaries, hence another aim is to seek ways for an eventual reduction in urban, regional and global levels of air pollution.

#### Local Organizing Committee

Chairman: J. Kondo (Science Council of Japan)

Vice-Chairman: K. Takeuchi (Japan Weather Assoc.)

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S. Suzuki (Chiba University)

H. Ueda (Nat. Inst. Env. Studies)

N. Ukeguchi (Mitsubishi Heavy Ind. Ltd.)

O. Yokoyama (Nat. Res. Inst. Poll. Res.)

T. Yoshikawa (Met. Res. Inst.)

M. Yoshino (University of Tsukuba)

#### Scope and Topics

Applied and urban climatology

Applied meteorology

Air quality meteorology

Atmospheric chemistry, aerosol science

Cloud physics and chemistry

Measurements and monitoring techniques

Urban, regional and global air quality

Air quality modelling and prediction

Environmental impact assessment

Environmental decision and policy

#### Special Sessions

Atmospheric phenomena over complex terrain

Long-range transport

Acid rain

#### Submission of Abstracts

Contributions are invited on any of the above topics. The official language to be used at the meeting will be English. Informative abstracts of about one page (200-400 words. Specify the classification of Scope and Topics) should be submitted to:

Dr. H. Ueda, Secretary General, 2nd Int. Conference ASAQ,

Nat. Inst. Environ. Studies, Yatabe-machi, Tsukuba, Ibaraki 305, Japan

#### Deadlines

Final date for receipt of abstract: March 1, 1988

Authors informed concerning acceptance: July 1, 1988

#### Proceedings

Selected papers will be published in a special issue of 'Atmospheric Environment' subject to the Journal's normal peer review process.

#### International Organizing Committee

M.E. Berlyand (USSR)

Y.S. Chung (Canada)

R.A. Duce (U.S.A.)

G.S. Hart (U.S.A.)

D.J. Moore (U.K.)(chairman)

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K. Takeuchi (Japan)

W.X. Wang (China)

Z.P. Zhao (China)



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

**MEMBERSHIP APPLICATION AND/OR SUBSCRIPTION ORDER FORM**  
**DEMANDE D'ADHESION ET/OU DEMANDE D'ABONNEMENT**

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(bus./travail) \_\_\_\_\_  
Occupation/Emploi \_\_\_\_\_

**Membership Category - Catégorie de Membre (please check)**  
**(cochez s.v.p.)**

Regular \_\_\_\_\_ Student \_\_\_\_\_ Corporate \_\_\_\_\_ Sustaining \_\_\_\_\_  
Régulier \_\_\_\_\_ Etudiant \_\_\_\_\_ Corporation \_\_\_\_\_ Soutien \_\_\_\_\_

**Primary Field of Interest - Sphere d'Intérêt Principal**

Meteorology - Météorologie \_\_\_\_\_  
Oceanography - Océanographie \_\_\_\_\_

**Special Interest Group - Groupe d'Intérêt Spécial**

Hydrology - Hydrologie \_\_\_\_\_  
Air Pollution - Pollution de l'air \_\_\_\_\_  
Agriculture and Forest - Agriculture et forêt \_\_\_\_\_  
Operational Meteorology - Météorologie d'exploitation \_\_\_\_\_  
Floating Ice - Glace dérivante \_\_\_\_\_

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Climatological Bulletin \_\_\_\_\_  
Chinook \_\_\_\_\_

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Faire parvenir la demande d'adhésion complétée et chèque  
(cotisations au verso) à:

**CMOS - SCMO**  
**Suite 903**  
**151 Slater St.**  
**OTTAWA, Canada**  
**K1P 5H3**

**Note:** Applications received after Oct. 1 are applied to the following year unless otherwise requested.

**Note:** Les demandes d'adhésion reçues après le 1er oct. sont pour l'année suivante à moins qu'elle soit requise pour l'année en cours.

**\* NOTE: MEMBERSHIP AND SUBSCRIPTION FEES ARE SHOWN ON REVERSE SIDE.**  
**LES COTISATIONS ET ABONNEMENTS SONT IMPRIMÉS AU REVERSE.**

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COTISATIONS ET ABONNEMENTS ANNUELLES (1988)**

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- Note:**
1. Regular Membership includes Newsletter.
  2. Student Membership includes Newsletter and Atmosphere-Ocean.
  3. Corporate and Sustaining Members receive all regular publications.

- Note:**
1. Membre Regulier inclus Le Bulletin
  2. Membre Etudiant inclus Le Bulletin et Atmosphere-Océan.
  3. Tous les periodiques sont envoyes aux Membres Corporatifs et de Soutiens.

THE CERTIFICATE PROGRAM IN DIGITAL REMOTE SENSING  
AT THE UNIVERSITY OF WATERLOO

A five day course on DIGITAL ANALYSIS IN REMOTE SENSING will be offered by the Faculty of Environmental Studies, University of Waterloo in collaboration with the Ontario Centre for Remote Sensing, Ministry of Natural Resources. The course will be held from November 2 - 6, 1987.

Participants will:

- \* receive an overview of current analysis techniques in hardcopy and digital LANDSAT imagery.
- \* learn how to incorporate the various remote sensing products and ground truth analysis in a multistrategy approach to analysis in geology, forestry, water resources and land use.
- \* gain "hands-on" experience in analysis of digital LANDSAT data using the interactive computers at the University of Waterloo and the Ontario Centre for Remote Sensing.

A university degree is not required, although applicants should have an introductory course in air photo interpretation or remote sensing, or some practical experience in the field.

For further information, please contact:

Dr. Ellsworth F. LeDrew  
Department of Geography  
Faculty of Environmental Studies  
University of Waterloo  
Waterloo, Ontario  
N2L 3G1 (519) 885-1211, ext. 2783 or 3463

ANNOUNCEMENT

3RD STREAMFLOW FORECASTING WORKSHOP

OCTOBER 21 AND 22, 1987

HOLIDAY INN DOWNTOWN

89 CHESTNUT STREET

TORONTO, ONTARIO

M5G 1R1

(416) 977-0707

Theme: Operational Streamflow Forecasting.

A block of rooms is being held until September 14, under the name Streamflow Workshop at the rate of \$59.00 single, \$69.00 twin/double. Please make your reservations directly with the hotel.

A request for presentations is being made. Those interested in making a presentation, please contact the Streamflow Forecast Centre in Toronto (416) 965-6292. Suggested topics include: Impact of Automation on Streamflow Forecasting, Data Requirements, Standardizing Data Formats, Use of Radar, Satellite, Problems, Innovations, "Your Choice", etc.

The format of this workshop will be similar to the previous ones at Downsview in November 1983, and Montreal in June 1985. A tentative agenda will be available at a later date. For further details, please contact the Organizing Committee:

In Toronto, Ontario  
Peter Gryniewski (416) 965-6292  
Robert Fox (416) 965-6292  
Barry Goodison (416) 667-4914

In Hanover, Maine  
Jack MacPherson (519) 364-1255

In Fredericton, New Brunswick  
Jerry Lockhart (506) 453-2353

Spring / Printemps 1987 Vol. 9 No. 2

FROM THE EDITOR'S DESK	27
FLAVIT ET DISSIPATI SUNT - IT BLEW AND THEY WERE SCATTERED: THE SPANISH ARMADA STORMS. A Weather Perspective of July to October 1588	28
FALL OF '86 - A REVIEW By Peter Scholefield	44
EXTRAORDINARY CLIMATOLOGICAL EVENTS - 1986 By Peter Scholefield	45
FALL RAINS ON THE PRAIRIES By Hans Van Leeuwen	46
BOOK REVIEW	46
PRÉSENTATION D'ARTICLES POUR LE <i>Chinook</i> À L'INTENTION DES AUTEURS	47



The University  
of  
British Columbia

## ATMOSPHERIC SCIENCE

The Departments of Oceanography and Geography at the University of British Columbia have funding to establish a new programme in Atmospheric Science. There will be four new faculty positions: one senior and three junior tenure-track together with new teaching and technical support staff. The senior appointee will be the chairman of the programme providing academic leadership. The group together with existing climatological and oceanographic expertise will offer new degree and diploma programmes in meteorology and atmospheric science at the undergraduate and graduate levels and will conduct research into the causes and consequences of climatic variability at all scales.

Applications are invited from outstanding candidates in relevant fields of atmospheric science and physical oceanography. Applicants should be prepared to teach undergraduate and graduate level courses in physical, dynamical or synoptic meteorology, or oceanography and to contribute to related degree programmes in the environmental sciences. Research interests must complement and extend existing work in boundary layer and mesoscale climatology; hydrology; dynamic oceanography; air-sea interaction and remote sensing, and/or develop new research in climatic change and atmosphere-ocean coupling. The chairman and one junior appointment will be made in Geography and two junior appointments will be made in Oceanography.

Applications and requests for further information should be sent to the Chairman of the Search Committee, Dr. T.R. Oke, Department of Geography, The University of British Columbia, Vancouver, B.C., Canada, V6T 1W5 (Tel: (604) 228-2900). Applicants should send a personal resume, names of three referees and sample research publications. Ph.D. required, salary commensurate with experience. In accordance with Canadian immigration requirements, this advertisement is directed to Canadian citizens and permanent residents. **Appointments commence January 1, 1988 or July 1, 1988. Application deadlines: for chairman, October 15, 1987, for junior positions, November 15, 1987.**

OCEAN OR SOLID EARTH PHYSICS, University of Victoria, Department of Physics, Victoria, British Columbia, Canada. Applications are invited from Canadian citizens or permanent residents for an NSERC University Research Fellowship. Candidates should possess a Ph.D. degree, one or two years of post-doctoral research experience in an area of ocean or solid earth physics, and a willingness to participate in field research. Preference will be given to applicants with research experience in underwater acoustics, coastal physical oceanography, seismology, or marine and continental margin geophysics. A successful applicant in any of these fields would be expected to contribute to the graduate program of the newly established Centre for Earth and Ocean Research which encourages research collaboration with scientists at the nearby Institute of Ocean Sciences, the Pacific Geoscience Centre and the Defence Research Establishment Pacific. Applicants should have a strong background in general physics and should be capable of teaching the standard courses in an undergraduate physics degree program. The candidate selected will be nominated by the University for an initial 5 year term as an NSERC University Research Fellow: the final decision on such awards rests with NSERC. On the recommendation of the University a fellow is eligible for appointment to a second five year term on a tenure track leading to a permanent university position.

The University of Victoria offers equal employment opportunities to qualified male and female applicants. NSERC regulations require that University Research Fellow nominees be Canadian citizens or permanent residents at the time of nomination.

Letters of application including a curriculum vitae, publication list and names and addresses of three referees, should be received as soon as possible, but certainly no later than October 1, 1987. Send to: Chairman, Department of Physics, University of Victoria, P.O. Box 1700, Victoria, British Columbia, Canada V8W 2Y2

AUSTRALIA

# CSIRO

RESEARCH FELLOW (CLOUD MICROPHYSICIST)

A\$28,629 -A\$41,861

DIVISION OF ATMOSPHERIC RESEARCH

ASPENDALE VIC

**THE DIVISION:** The Division of Atmospheric Research has a staff of 130 including 70 professional scientists and undertakes research into physical and chemical aspects of atmospheric phenomena and related areas. The Division is contracted to provide scientific direction for a 5 year precipitation enhancement experiment soon to be commenced in southern Australia. A cloud microphysicist is required as a member of the team providing this scientific direction.

**DUTIES:** In collaboration with senior scientists, to undertake research into microphysical properties of cloud characteristics with the overall aim of assessing natural precipitation processes and the suitability of the clouds for seeding to increase precipitation. To engage in field studies of clouds with the instrumented CSIRO F-27 aircraft available to the Division, and to participate in the analysis and interpretation of the data collected. To work closely with other scientists to increase the overall understanding of the cloud system on the regional-scale, on the mesoscale, and on the microscale.

**QUALIFICATIONS:** A Ph.D. degree or equivalent qualification in atmospheric science or related field. Willingness to engage in field oriented research into the microphysical characteristics of clouds using instrumented aircraft. Familiarity with the practices of precipitation enhancement experiments would be an advantage.

**CONDITIONS:** The appointment will be for a term of 5 years with the possibility of a further term. Australian Government Superannuation benefits are available.

**MORE INFORMATION:** Prospective applicants are invited to telephone Dr. Alex Long (03) 586 7666 for further information. Dr. Long can also provide a copy of the detailed job description and selection criteria.

**APPLICATIONS:** Applications should be submitted by 2 October 1987 and quote reference number M7845. They should be framed against the selection criteria, and should state relevant personal particulars including details of qualifications and experience. At least two professional referees should be nominated. Applications should be addressed to:

The Chief,  
C S I R O Division of Atmospheric Research,  
Private Bag 1,  
MORDIALLOC, Vic. 3195, AUSTRALIA



MEMORIAL UNIVERSITY OF NEWFOUNDLAND  
St. John's, Newfoundland, Canada A1B 3X7

*Department of Physics*

*Telex: 016-4101  
Telephone: (709) 737-*

10 July 1987

TWO PHYSICAL OCEANOGRAPHY FACULTY POSITIONS  
MEMORIAL UNIVERSITY OF NEWFOUNDLAND

Applications are invited for one new and one replacement tenure-track faculty appointment in PHYSICAL OCEANOGRAPHY to be made in the Physics Department, Memorial University of Newfoundland. Rank and salary are negotiable and commensurate with the qualifications of the appointee. Experience beyond the Ph.D. degree is preferred. The position offers a challenging academic career with stimulating research opportunities focussing on the Northwest Atlantic and the Labrador Current. The Department's Physical Oceanography Group is engaged in theoretical and experimental studies of coastal and continental shelf oceanography, deep ocean circulation, Lagrangian dynamics, numerical modelling and acoustic remote sensing.

Candidates are sought whose primary interests are in continental shelf oceanography, turbulence, or ice/polar oceanography. However, qualified individuals with expertise in other areas of physical oceanography are encouraged to apply. An interest in interdisciplinary problems would be an asset. Applications from both experimentalists and theoreticians are encouraged. The appointment will include teaching duties at the graduate and undergraduate levels. Inquiries can be directed via Telemail to NICOS, attention Alex Hay. Curriculum vitae including the names of three referees should be sent to Dr. D. H. Rendell, Head, or to Dr. Alex Hay, Department of Physics, Memorial University of Newfoundland, St. John's, Newfoundland, A1B 3X7.

In accordance with Canadian Immigration policy, this advertisement is directed, in the first instance, to Canadian citizens and permanent residents of Canada.

DIRECTOR APPOINTED TO DEVELOP  
UVIC CENTRE FOR EARTH AND OCEAN RESEARCH

Dr. Robert W. Stewart, distinguished physicist and administrator, has been appointed Visiting Professor of Physics and Interim Director of a new Centre for Earth and Ocean Research at the University of Victoria. He assumed his new post on July 1, and will be responsible for developing the new Centre, promoting its research, and securing external sources of funding for its activities. His appointment is for a term of 2 years.

Stewart has had a long and distinguished career in physics, making outstanding contributions in oceanography and meteorology. In addition to being a Fellow of the Royal Society of Canada, he has been elected a Fellow of the Royal Society of London.

The new Centre will combine research and graduate studies in geophysics, ocean physics, geology, and ocean engineering. It will build on the expertise in UVic's departments of Physics, and Geography, and Faculty of Engineering and their strong links with the many outstanding provincial and federal government research laboratories in the Victoria area. It will help to consolidate the Victoria area as a major centre for earth and ocean sciences research, which is so important to the mining, fisheries, and other resource-based industries of British Columbia.

In 1970, Dr. Stewart organized the Institute of Ocean Sciences at Patricia Bay and served as its first director.

He became Assistant Deputy Minister, Science and Technology, in the Ministry of Education, Science and Technology in 1979, and served as Deputy Minister, Ministry of Universities, Science and Communications from 1979 to 1984. Since then, Stewart has served as president of the Alberta Research Council.

Dr. Stewart received his M.Sc. in physics from Queen's University in 1947 and his Ph.D. in physics from Cambridge University in 1952. From 1950 to 1955, he worked at the Pacific Naval Laboratory (now DREP) of the Defence Research Board in Esquimalt and then at the Institute of Oceanography at U.B.C. In 1960 and 1961, he was Visiting Professor at Dalhousie University, where he helped establish the Institute of Oceanography.

Returning to U.B.C., Stewart was Professor of Physics and Oceanography from 1961 to 1970. During this period, he was also Visiting Professor at Harvard, Penn State, and Cambridge universities, and paid a three-month working visit to the Institute of Atmospheric Physics in Moscow.

For many years, Dr. Stewart has been involved with the international organization of science. He was active in the Global Atmospheric Research Programme (GARP) from its inception, and has just completed a term as chairman of the Committee on Climatic Changes and the Ocean, organizing the oceanic aspects of the World Climate Research Programme.

ADVERTISING RATES - CMOS NEWSLETTER

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Bedford, Nova Scotia  
B4A 1R5

NEWSLETTER SUBMISSIONS

The following summarizes the publishing schedule for future issues of the Newsletter. If possible the editor would appreciate receiving material in ELITE type print, 12 characters/inch, and set in columns 50 characters wide. For example set the margin at column 10 and at column 60.

DEADLINE FOR SUBMISSIONS	VOLUME AND ISSUE	
OCT. 16, 1987	OCTOBER	VOL 15 NO.5
DEC. 18, 1987	DECEMBER	VOL 15 NO.6
FEB. 19, 1988	FEBRUARY	VOL 16 NO.1
APR. 15, 1988	APRIL	VOL 16 NO.1
FEB. 01, 1988	MAY	VOL 16 NO.2*
JUN. 17, 1988	JUNE	VOL 16 NO.3

\* VOL 16 No.2 is the ANNUAL REVIEW and takes longer to prepare and print therefore the deadline is much earlier than for a regular issue.

Submissions should be sent to:

Mr C.F.Mac Neil  
Editor, CMOS Newsletter  
Atmospheric Environment Service  
1496 Bedford Highway  
Bedford, Nova Scotia  
B4A 1R5

phone:(902) 835-9534

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