

## **Things to be Joyful about at Christmas**

Christmas has always been a season of peace, joy and glad tidings to be celebrated by families according to their own ways and traditions. The details of these celebrations vary from home to home, and among the various groups and communities to which we as individuals belong.

Most readers of Zephyr share a large portion of their time, their energies and their talents in the community of the workplace as members of Environment Canada and the Atmospheric Environment Service "family". As we move into another new year it's a good time to reflect on the achievements of our working community over the last 12 months and our prospects and hopes for the future.

We in AES can be proud of our success in providing an essential service for Canadians from coast to coast. Our work is especially important at a time of year when weather conditions can make travel risky and uncertain.

We can take pride in the solid reputation that AES enjoys internationally as a first class weather service. In co-operation with the World Meteorological Organization and other agencies, we continue to provide technical expertise and hardware to those countries most in need of such assistance.

We should be glad that progress is being made in encouraging the development of private sector meteorology. Several Canadian Com-



**H. L. Ferguson**

panies are engaged in the development of state-of-the-art meteorological equipment and techniques with significant export markets. Many Canadians now have access to a 24-hour cable television weather channel, a private sector initiative which has received strong AES support.

We should take satisfaction from the fact that all Canadians can now feel a little safer in the face of tornadoes, flash floods and other severe weather conditions. A major upgrading of weather warnings and forecast dissemination has been implemented following recommendations of the Hage Report issued after the

disastrous Edmonton tornado of 1987. Enhanced educational programs and greater media awareness have given Canadians a better understanding of how to protect themselves against these perils. At the same time, keeping pace with communications systems allows AES to offer better information for the protection of such groups as farmers, fishermen and off-shore oil rig operators.

We should be pleased that, over the past decade, we have been able to upgrade working conditions for AES employees stationed in the remote High Arctic. Television, first rate communications, improved transportation, and even recreation centres, are all helping to reduce the sense of isolation felt by scientific and weather service personnel north of the Arctic Circle.

A major accomplishment in 1988 was the hosting of widely-acclaimed international conference on The Changing Atmosphere. The success of that event was the result of a great team effort within the Service, at the departmental and interdepartmental levels, and with our colleagues from other countries. This was the first occasion when an AES-led meeting has attracted the participation of two prime ministers.

It highlighted three aspects of atmospheric

cont'd page 4

## **AES Downsview Building to Have Major New Annex**

The first major new addition to the AES Downsview Headquarters Building since it opened in 1971 will shortly get underway. Senior management has approved plans for the construction of a three-story structure directly south of the main building and separated from it by a landscaped courtyard. A covered walkway, however, will link all three floors of the new building on the south side of the current building.

On two floors the new building, known as Downsview South, will house AES Ontario region, including the director's office, now located in midtown Toronto and both the Ontario Weather Centre and Toronto Weather Office, now located at Pearson International Airport. The third floor

will provide space for research laboratories which are now located in the Downsview AES building.

The architects, Moffat Kinoshita Associates of Toronto, hired by Public Works Canada, say they have tried to design a distinctive, separate building which, despite sharing certain characteristics with the original building (eg. concrete overlays and large windows) will have its own unique personality. In order to maintain harmony, Gene Kinoshita says he has consulted Boignon and Heinonen, architects of the Downsview AES building. The new building will be slightly less than a quarter of the size of the current structure.

Other features of the new building will be

a two-storey entrance lobby, raised flooring throughout the first and second floors, two elevators off the main lobby and separate mechanical systems for the laboratories which will comply with the National Building Code.

The new building will require the construction of a new access road forking off from the main AES entrance road. It will also require construction of a new southside parking lot.

cont'd page 4

## AES Hosts World Meeting of Met Training Heads



Participants at the meeting of the heads of meteorological training programs are seen here from left to right: Dr. Richard Simonis, Federal Republic of Germany, Lloyd Berntsen, Dr. Richard Myers, USA, Mr. Geoffrey M. Rudder, WMO, Mr. David Shaw, UK, Mr. Rod Stainer, New Zealand, Dr. Daniel Rousseau, France, Mr. John P. Mottram, Australia, Dr. Marvin Maddox, USA.

AES hosted a meeting of managers of training from several countries between July 12 and 15 at headquarters in Downsview, Ont. Lloyd Berntsen, AES director of Training Branch, served as chairperson of this first ever gathering of meteorological training managers. The WMO co-sponsored this event.

The meeting was set in an informal atmosphere allowing in-depth discussions of topics of common concern which formed the basis of co-operative efforts from all participants. A recommendation to have similar meetings every two

years was drafted for consideration by the WMO.

The gathering was initiated after a suggestion during the July 1987 Symposium on Education and Training, held in Reading, England. It would also allow an opportunity to address the WMO's Tenth Congress recommendations that "development of all Members' training efforts be enhanced if training institutions in the more meteorologically developed countries improve their standards through exchanges of information, experience and techniques."



Declaring that so many AES employees had made outstanding contributions to this summer's World Conference on the Changing Atmosphere that he could only name individuals "symbolically", ADMA Howard Ferguson handed out both group and individual awards to members of the loosely defined Conference Secretariat at an AES Downsview ceremony held August 25. The two persons singled out for Personal Achievement Awards were Nicole Sauve and Henry Hengeveld. As the picture shows they were joined by the group recipients. Seen left to right: Stewart Cohen, Al Godin, Barb Grogan, Conference Secretary Gordon McKay, Mr. Ferguson, Nicole Sauve and Henry Hengeveld.

Addressing a large audience of well wishers in the Auditorium, Mr. Ferguson also read out a list of other employees who had helped give the Conference its huge aura of success, as part of a remarkable team effort.



Barry Greer, chief meteorologist at the Ontario Weather Centre, recently received an AES Achievement Award for his outstanding performance in developing "Project Tornado", a program to heighten public awareness of the nature and danger of tornadoes and to assist people to be better prepared and minimize the associated risks to life and property. Highlight of the project was a unique, one-day workshop for municipal officials and others held at Fergus, Ont. on March 30, 1988. Over 100 attended with a view to developing emergency measures procedures. Mr. Greer is seen here, left, receiving his award from ADMA Howard Ferguson.

## Highlights

Christmas Weather Browsing	3
Atmosphere People	5
Book Review	7
Staff Changes	10
AES at Junior World Games	8
Antarctic Pictures	6

## ZEPHYR

ZEPHYR is a staff magazine for employees of the Atmospheric Environment Service, Environment Canada, produced by the Communications Directorate of Environment Canada.

Please address correspondence or article contributions to: ZEPHYR, Atmospheric Environment Service, 4905 Dufferin Street, Downsview, Ontario M3H 5T4.

Editor: Gordon Black  
Photo assistance: Bill Kiely, Joan Badger  
Phone: (416) 739-4760



Environment Canada / Environnement Canada

Atmospheric Environment Service / Service de l'environnement atmosphérique

# Thunder in Sydney, Australia, Ice Crystals in Whitehorse ...Christmas Weather Browsing Can be Fun

by Gordon Black

Here's a Boxing Day pastime that should appeal to all armchair travellers, many AES support staff and any family members who happen to have an arm's length interest in Weather. (Meteorologists and Met. Techs probably have something better to do on their day off!).

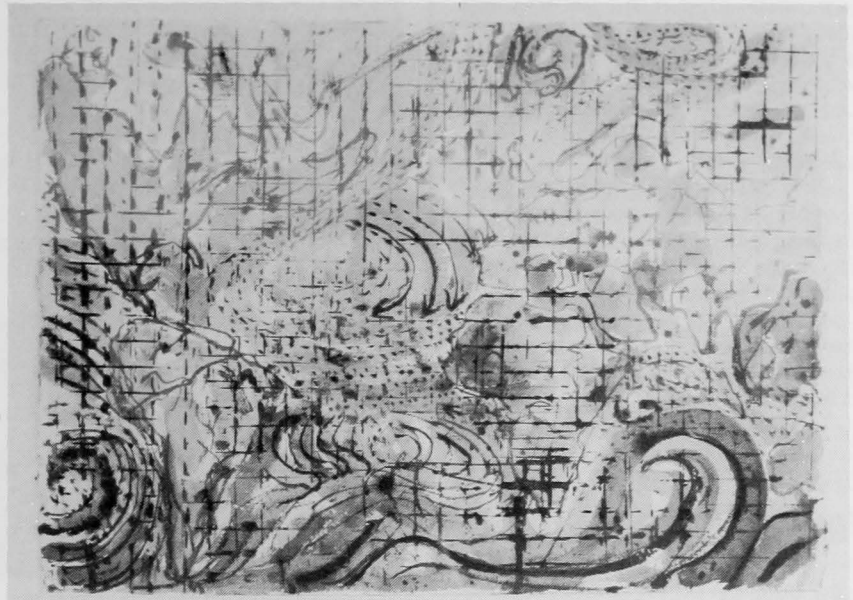
You simply have to browse through the temperatures and brief weather details listed in the newspapers or on TV weather channels for a wide range of distant and/or exotic cities. It's the quickest way by far to find out how the inhabitants of these places (or any sun-seeking visitors) enjoyed Christmas day, meteorologically speaking.

Take last Christmas for example. For convenience sake I consulted the weather section of the Globe and Mail (Canada's national newspaper). One of the best places to be was Miami which basked in sunny Christmas Day temperatures of 26 degrees Celsius. If you like to spend your Yuletides lolling on the beach, you were entitled to feel a tad envious (if by chance, temperatures had dipped to a chilly 10 degrees, you could rightly feel a little smug). Manila in the Philippines had similar conditions, but on the whole, the world weather picture on December 25, 1987 was rather uninspiring, even disappointing.

Paris had rain, London was cloud covered, Tokyo was hazy and Geneva was fogged in. Even lush tropical places like Singapore and Nairobi were cloudy or overcast, suggesting humidity was unpleasantly high. You'd expect better things from "downunder" cities, where Christmas occurs in midsummer. But all that Auckland, New Zealand could come up with was a drizzly 18 degrees C maximum; while Sydney, Australia registered afternoon temperatures of 19 C and cloudy. Another thing you'd notice if you looked at last year's round-the-world Christmas weather, was the complete absence of snow outside North America. It's particularly disappointing when Moscow reports only -6 degrees and cloudy. At least you expect a few snow flurries from the capital of a country that has even closer ties with winter than Canada.

If you prefer your Christmas weather to be "traditional", the best place to have been in 1987 was Canada. Yellowknife, The Soo, Quebec City, Fredericton, Saint John, N.B. and Halifax all reported snow. And Churchill, Manitoba though snow-free, reported a chilly, cloudy -30C. In Toronto of course, Christmas maximums were +7C and it rained. Even Montreal and Ottawa, normally in the snow belt, served up a Christmas menu of fog and drizzle.

On the whole, Christmas 1983 was far snowier. Oslo (Norway) and Helsinki (Finland) proved they really were part of the European snow belt by reporting Yuletide snowfalls. And



**This semi-abstract painting by Canadian painter, Paterson Ewen, on world weather systems, now on loan to AES and displayed in ADMA's boardroom in the Downsview Headquarters, forms an apt illustration for an article for those whose interest in international weather is not entirely scientific.**

there was a sense of "all's right with the world" when Moscow reported the same thing. Canada too had snow in a few selected cities: Whitehorse, Yellowknife and Churchill, where the maximum temperature plunged to a chilly -28C. Quebec City, another of Canada's "snow capitals", disappointingly reported rain.

For far-away weather browsers, Christmas 1984 had some interesting points. The inhabitants of Sydney, Australia must have celebrated a deafening yule since the only weather condition reported was thunder. For citizens of Whitehorse, Christmas must have had a picture post card beauty since the one meteorological phenomenon mentioned was ice crystals. The rest of Canada, by the way, was quite snowy with cities all the way from Edmonton to Goose Bay, reporting snow or blowing snow. (Even Toronto received some snow!). All the tropical and sub-tropical places behaved true to form with warm, sunny weather: Miami was 26 degrees C, Manila ditto, Dakar 20C., Cairo was clear and 19C., and Pretoria, South Africa 24C. Some U.S. cities were chillier than usual San Francisco in "sunny California" only managed 3 degrees C and overcast, while Chicago was a freezing minus 18 C.

Once again, Christmas 1984 restricted its snowfalls mainly to Canada. There were none reported in the European snowbelt. Moscow was 15C and clear. Warsaw was the sole large Eastern bloc city to report snow.

That's about all there is to know about

Christmas weather browsing. Now, all you have to do is keeping your eyes glued to newspapers or TV weather channels on December 26 to see how things worked out. Happy weather watching!

NOTE: International weather data displayed in AES weather offices and in the media is supplied by the World Meteorological Organization's Global Telecommunications System following assembly in the three world weather centres located in Washington, Moscow and Sydney, Australia. In Canada the data is first obtained by the Canadian Meteorological Centre in Dorval, Que., then sent out either via AES's internal communications network to all Canadian weather offices or via media wire to radio-TV stations or newspapers across the country.



## Joy at Christmas cont'd.

chemistry problems in which AES has been an international leader. First, it stressed the interconnectedness of such major atmospheric issues as Climate Change, Stratospheric Ozone Protection and Acid Rain. Second, it emphasized and provided breakthroughs in communication between scientists and socio-economic policy makers, between east and west, and between advanced and developing countries. Third, it achieved a remarkable consensus on a number of specific recommendations for action, including the need to develop a comprehensive international framework agreement, or Law of the Atmosphere.

The conference contributed to the remarkable movement this year, of environmental concerns to the centre of the world's economic and political stage. The event clearly reinforced the reputation of Environment Canada and of AES as being one of the leaders among national meteorological services in the expanding priority area of Changing Atmospheric Chemistry and its impacts.

Finally, we should be pleased that AES is

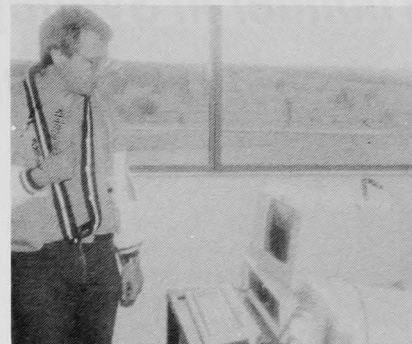
continuing to keep pace with advances in science and communications, and that we have a strategic plan which will enable us to take in stride the rapid changes in technology over the next twenty years.

The plan will provide new opportunities for personal development and job satisfaction. We will continue to emphasize the teamwork and esprit de corps which has characterized our service since its inception in 1871. That tradition should give us great confidence and enthusiasm for the future.

Most of us will have the pleasure and special joy of spending at least part of the holidays with our families. Those who will be working holiday shifts in weather offices from coast to coast deserve our special thanks as we reflect on the achievements and future bright prospects of the "AES family".

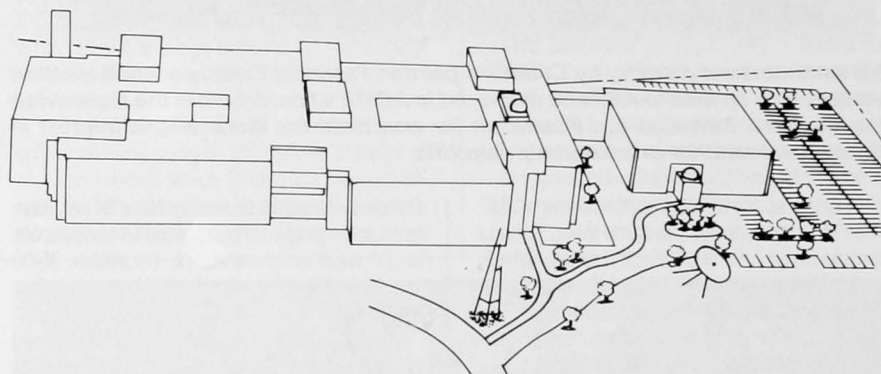
I wish you all a joyous holiday season and a satisfying and productive New Year.

H. L. Ferguson  
Assistant Deputy Minister



**Dr. Ray Hoff, air quality scientist at the new Centre for Atmospheric Research Experiments (C.A.R.E.), located at Egbert, Ontario checks the newly installed Lidar equipment for monitoring aerosols. Full coverage of the official opening of the sophisticated new AES facility with a run-down of its principal components, all in the area of atmospheric chemistry, will be given in the next issue of Zephyr.**

## Downsview South cont'd.



**This is a drawing of the model of the new Downsview South building, showing its links with the AES Downsview Headquarters Building directly to the North. The "annex" is the compact, box-like structure, surrounded by trees, seen on the far right.**

Downsview South will be given an "environmental look" through the planting of many new trees and shrubs. The new courtyard with its flowers and ornaments is intended to give the site a human dimension.

According to Paul Latremouille, AES chief of Facilities Management, construction is tentatively scheduled to begin in the summer of 1989 and, if all goes well, the building will be ready for occupancy near the beginning of 1991. He added that there will be provisions for further expansion of the building, especially the addition of a fourth floor, if required in the future.

The new building can house up to 150 employees, though not all of them will be there at the same time, since Weather Services employs many shift workers. The AES cafeteria which already caters to about 800 employees has recently been expanded to accommodate extra staff from the new building. Downsview South will also have its own lunch room to meet the needs of 24-hour operators.

Despite changes due to the new building, many things will remain the same. Ron Baird's giant weather sculpture will not be removed from its site in the south west corner and the weather satellite dishes in the same area will also remain. There will be no changes to the Day Care Centre, which also shares this busy corner, except that it will be possible for users to use the new access road.

No new land will be acquired for the project and the boundary between AES territory and the adjoining Ross Lord Conservation Park will not be changed. The instruments on the main building roof used by Experimental Studies, will remain operational and would only be at risk if a fourth floor were added to Downsview South. The only area to disappear would be the instrument compound in a field directly south east of the current building. It will subsequently be relocated in a scaled down version closer to Dufferin Street and possibly on to the roof of Downsview South.



**Some of the people involved in the planning and logistics of the new Downsview South Building are seen here examining a model of the structure. They are, left to right, Lou Berthelot, OIC, Toronto Weather Office, Randy Ohar, Public Works Canada, Cathy Capes and Brian Lodge, both with the architectural firm of Moffat Kinoshita Associates, Paul Latremouille (AAX), Joe Boll, AES director of Finance and Administration and Gene Kinoshita.**

### AURORA (AURORA BOREALIS)

The luminous, radiant emission from the upper atmosphere over middle and high latitudes, and centred around the earth's magnetic poles. These silent fireworks are often seen on clear winter nights in a variety of shapes and colours. Also referred to as the NORTHERN LIGHTS.

# ATMOSPHERE PEOPLE



The career of Brenda Smith proves, if anything, that there is more than one way to reach the atmosphere.

Her "formal" training in meteorology consisted of a one week course for non-meteorologists which she took soon after joining AES in 1985. (She now works in the office of the director general of Weather Services in Downsview advising him on personnel matters.)

She learned about weather the hard way, photographing fog, ice pellets or severe thunderstorms with a video camera, while flying through them in a light plane. It was all part of the job she held for a decade in the Television Services Unit of the Department of Transport's air traffic control Training section. Brenda's father was an air traffic controller and she realized at an early age that weather and flying were two very closely related fields.

Brenda goes on to explain: "One of the best ways for air traffic controllers to understand the effects of weather in differing flying conditions is to film it at close range and incorporate the results in their training sessions." Of course teaching controllers about weather was only part of the job. She also made films about job stress, career opportunities and management training.

Brenda started making programs at DOT by having a video camera virtually thrown at her. (She had been hired as a graphic artist.) She had little formal training when she first started in the field, but it was noted by her superiors that she had an inborn aptitude for camera work. Adds Brenda, "It was a turning point in my career. As soon as I started to work with the camera, I knew I could master it." Her other gift was her instinct for rhythm and music (She plays the guitar.) Within a very short time,

she had risen from "cameraman" to studio manager.

Even Brenda's entry into AES was via a rather round-about route. Having gained experience in making a wide variety of films (Some for other sections of DOT, some for CBC), she welcomed an opportunity to join Parks Canada which had recently become part of Environment Canada to fill a vacancy for a film maker. "It was wonderful going across Canada filming National and Historic Sites. What magnificent scenery!" One of the films she enjoyed doing was an instruction video on how to wear and care for historic costumes.

In the mid-eighties the National and Historic Parks service underwent budget cuts and could no longer afford a permanent film unit. Brenda transferred to DOE's corporate Personnel office where she did work in supervisory and management training. As she had desired a career change, she welcomed this unexpected opportunity. She describes this phase of her career as "a momentous time" allowing her to establish her true goals and find out that she had a wide variety of capabilities. She was once again about to embark in a new direction.

The opportunity arose when she was offered a position in Toronto in the office of the director general, AES Weather Services as a personnel and administration officer. She describes her introduction to the job as "most exciting." Within a couple of weeks of joining she was sent on a whirlwind tour of AES's high Arctic weather stations, specifically to study the effects of isolation on technicians forced to spend long periods in the polar night. At this time a couple of recruitment and training films on the same subject happened to be in production for AES and because of her former experi-

ence in TV production, Brenda was able to act as an advisor to the private company involved in this work. She says the subject of isolation appealed to her as she had long been a volunteer worker at women's prisons in the Ottawa area where inmates are also isolated from society.

Brenda says she very much welcomes her change in career. She is involved in Met. Tech employment problems and is particularly interested in employee equity programs. For the past year she has coordinated AES's successful new Training-on-the-Job project for native recruits across Canada. In addition she sees her current job as a stepping stone to future opportunities involving policy . . . perhaps at some stage working in a Minister's office.

For the nonce she seems to have abandoned both her film career and her early direct contacts with weather. But in reality she says it's all a "matter of degree".

As far as film making goes, she still retains her interest, but would now prefer to oversee film productions rather than dash around with a video camera. She suggests she might be able to fulfill this role as a government Communications officer.

And as for being an "atmosphere person" she insists she is still very much one, in spirit, if not in daily practice. "Right now my Met. Techs are both my weather eye and my weather skin", she adds proudly.



**When Doreen Belnavis of Supplies and Services, located in the AES Downsview Building, went to give blood at the regular fall Red Cross donor clinic she received a pleasant surprise. Clinic coordinator Lucy de Carlo was there to present her with a certificate and pin in honor of her having donated her blood 35 times in a row. She is seen here (left) in the AES lobby where the one-day clinics are held.**

# ***“Bi-polar” Dennis Stossel sends us Pictures of Antarctica***

In his new position as advisor, Polar Affairs, long-time AES High Arctic Weather Station expert Dennis Stossel, based at Central Region (Winnipeg), makes many presentations on the Canadian Arctic, ranging from summaries of scientific projects to reports on how to overcome feelings of isolation among personnel working above the Arctic Circle.

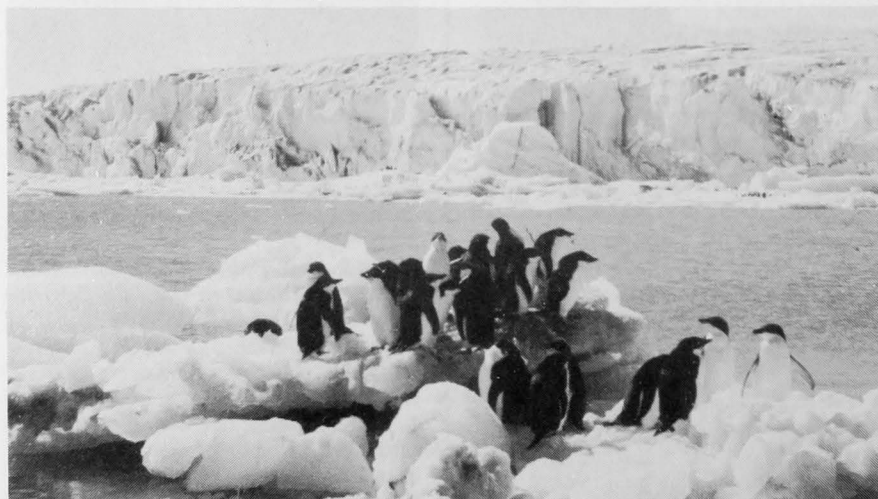
During 1988 Mr. Stossel has been on a month-long familiarization tour to Antarctica and has attended the Antarctic conference in Tasmania, Australia. The former, carried out nearly a year ago, included visits to research and/or meteorological stations run by up to a dozen countries, from Poland to Chile (including an advanced Spanish base doing ozone studies). We publish these photographs taken either by or of Mr. Stossel during his odyssey.



***Dennis Stossel presents a work on the Canadian Inuit to the commander of Argentina's Jubany Island, (Potter's Cove, King George Island), designated as a "site of special scientific interest" mainly because of its diverse fauna and vegetation.***



***In order to reach the various Antarctic stations, some run by the Argentine government or National Arctic Institute (DNA), others run by signatory countries of the Antarctic Treaty, Mr. Stossel travelled thousands of kilometers by plane and ship. Taken from the deck of the Argentine icebreaker/supply vessel Bahia Paraiso, he took photographs of "monster" ice floes, far larger and thicker than those found in the Arctic.***



***The best known, and most spectacular form of Antarctic wildlife is of course the penguin. There are 21 species of this flightless bird whose black and white coloring make them look as if they're wearing tuxedos.***



***One of the most awe-inspiring events of his Antarctic tour was his visit to Deception Island on the Antarctic Peninsula. It is the scene of an active volcano, (last eruption 1970). The picture taken of Dennis shows him standing on a beach strewn with volcanic ash. During the volcano, Chilean, British and Norwegian bases were destroyed and the Argentine base, though only partially destroyed, is now used strictly as a summer station.***



***Stossel's Antarctic journey really began in Buenos Aires, where he gave most of his briefings on the Canadian Arctic. He also had the opportunity of touring the Argentine Weather Service, run (with civilian support) by the Air Force section of the Ministry of Defence. He is seen here with the Meteorologists' shift supervisor.***

cont'd. page 7



*Despite their inability to fly, penguins use their wings as flippers. One of the birds in this picture is seen flapping its wings as if about ready to take off! All the penguins are of the Adelle species, the most common kind.*

**Note:** Dennis Strossel, along with Dr. Peter Suedfeld, dean of the faculty of Graduate Studies, University of British Columbia, were invited to make a "Transpolar Research Opportunities Survey" trip by Dr. Jorge P. Bernaldez of Buenos Aires, director General Coordination for Antarctic Research Programs and Operations.

#### PROBABILITY OF PRECIPITATION

Probability forecasts are subjective estimates of the chances of encountering measurable precipitation at some time during the forecast period. Measurable means at least 0.2 mm of rain or the water equivalent of snow. For example, a 40% probability of rain today means there are 4 chances in 10 that it will rain.

## BOOK REVIEW

**The Hole in the Sky by John Gribbin.**  
Bantam New Age Books, May 1988;  
192 pages; \$5.50.

Reviewed by Lewis Poulin

John Gribbin's book, *The Hole in the Sky*, is a welcome source of factual and timely information for the general public on recently observed ozone layer depletions. This small paperback summarizes hundreds of pages of scientific literature and countless hours of discussion and debate into 192 pages (or eight short chapters) of informative and educational material on our changing ozone layer and atmosphere.

Whatever your level of interest or scientific literacy on the ozone issue, this book is highly recommended. While scientific terminology cannot be avoided, readers with non-scientific background need not leave it on the shelf. Gribbin might occasionally use too many numbers in his descriptions, but this only taxes your memory, not your mind.

This book is a result of Gribbin being an invited observer at a week-long scientific conference in Dahlem, West Germany, in November 1987. This opportunity allowed him to listen to several of the top atmosphere scientists as they presented data collected from Antarctica a few weeks earlier, which showed the most severe ozone layer depletion ever observed.

I appreciated the first five chapters of the book for their role in the presentation of the ozone problem, but chapter six on the Antarctic ozone hole is probably the one most readers will be eager to read. \$10-20 million were spent over the last two years on two international scientific expeditions to Antarctica to try and understand why ozone concentrations deplete over the southern pole during springtime. Of the three main theories proposed: solar activity, chemical and dynamic, the latest results point the finger at man-made chlorine and bromine chemicals in the upper atmosphere as the main culprits. These chemicals are called chlorofluorocarbons (CFCs) and halons. CFCs are used

as coolants in refrigeration units, as propellants in some aerosol cans, as blowing agents to make rigid foams and as solvents for electronics circuitry; while halons are mainly used in certain types of fire extinguishers.

The scientific community is also very interested in investigating possible ozone depletions in the northern polar regions. A joint American-Russian expedition is expected for the 1988-1989 winter to monitor the Arctic ozone layer. Curiously, Gribbin does not mention Canadian activities at all. Canadian scientists have been monitoring stratospheric chemistry since 1974 as part of Environment Canada's STRATOSPROBE project. High altitude research balloons are launched regularly to gather data on the ozone layer over Canada. In fact, in March 1988, the most northerly scientific research balloon flight took place from Alert (82 degrees 30 N, 62 degrees 20 W) to collect data on north polar ozone layer chemistry. More activities are planned for this winter.

Gribbin's well-rounded book lists most of the presently known ozone layer modifying theories, many of the chemicals harmful to the ozone layer and even devotes a chapter to the Greenhouse Effect, i.e. where greenhouse gases like carbon dioxide, methane, water vapour and yes, ozone and CFCs, absorb and reflect some of the earth's heat trying to escape into space. Our modern lifestyles are increasing the concentration of these gases into the atmosphere, which in turn is causing our atmosphere to get warmer. Climate modifications caused by this induced warming are expected to be even more serious than ozone layer depletions.

Politicians are already meeting internationally to discuss how to deal with the social impacts of ozone layer depletions and a changing atmosphere. In September 1987 a United Nations Environment Program conference saw 27 countries sign the Montreal Protocol to protect the earth's ozone layer by

adopting a global strategy to ban the use of CFCs. Gribbin and environmentalists are not yet satisfied. Had the conference been held after the latest Antarctica results, they claim, the meeting's objectives to phase out CFCs would have been taken more seriously. We must keep in mind though that many levels of government and industry are involved in these talks and rejoice that there is any agreement at all. The Montreal Protocol also has a key clause: the treaty will undergo a review every four years to keep the objectives current with the scientific evidence. Gribbin's book will be a valuable tool to educate politicians and public prior to future negotiations.

Gribbin encourages consumers to voice their desire to protect the ozone layer by finding out where CFCs are used and by refusing to buy products which contain ozone destroying chemicals. Friends of the Earth in England have produced a list of products which do not contain such chemicals. I have found no such list in Canada, but it could be a very interesting science fair project.

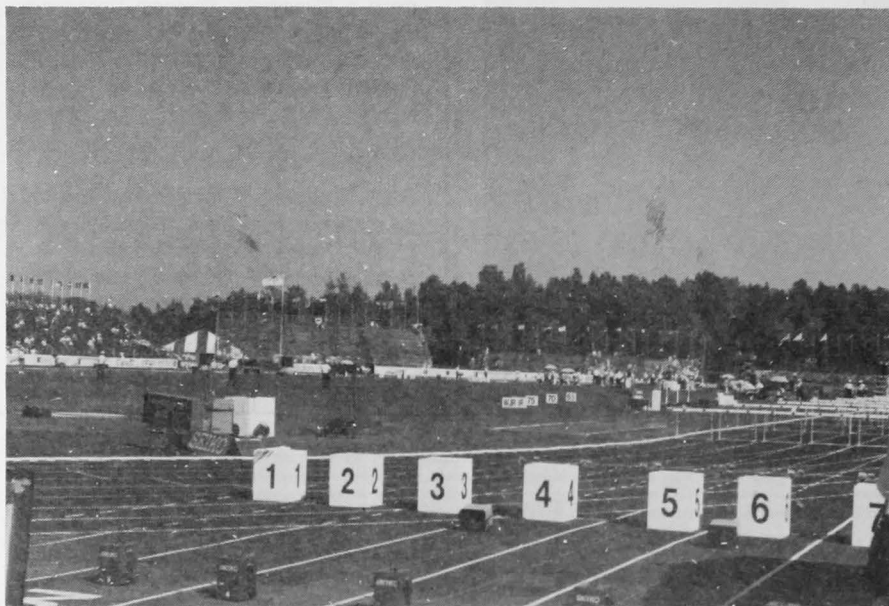
Gribbin's section on further reading is valuable and his index makes the book indispensable as a mini-dictionary on ozone related terminology. I would recommend this book for advanced high school science classes and up. Even social sciences students could benefit by discussing the social and environmental impacts of CFC and energy pricing.

Browsers might find leafing through Gribbin's diagrams frustrating since not all of them are properly labelled or quote their sources. I would have preferred SI units as well. Maybe in future an executive summary at the start of each chapter using non-scientific terms would be appreciated by readers with less scientific training.

However, as we head into battle again to save our ozone layer, rarely have so few pages done so much for so many.

Mr. Poulin is a research assistant with the Department of Experimental Studies, Downsview.

## AES Monitors Heat Stress at Sudbury Junior World Games



*The track scene at Laurentian University, Sudbury*

During the week of July 26 to July 31, 1988, 134 countries took part in the World Junior Games held at Laurentian University, Sudbury, Ontario. The event unfolded amidst an extravaganza of colors, fireworks, song and dance.

Such an event requires a good deal of organization including the creation of support groups for everything from traffic control to proper preparation of the track. The weather, naturally is of first importance and this fact was quickly recognized by the organizers. Denis Paquette, presentation technician, liaised between the medical component of the organizing committee and the Weather Office.

The first step was to set up an "on site" weather monitoring system consisting of a fire weather kit borrowed from the Ontario Ministry of Natural Resources. This kit is basically a portable weather station which measures temperature, relative humidity and wind speed. One of the responsibilities of the duty technician was to record all available weather parameters, including sky conditions and estimates of wind direction. Three Sudbury Weather Office employees participated in the on-site work: Denis Paquette, Mark Donaghue and Jack de Corby.

One additional system was used: a heat stress monitor borrowed from INCO. This produces an index similar to the humidex factor. The "heat stress index" was particularly significant as the week produced record breaking maximum temperatures. Add to this a high relative humidity and low wind speeds and you have all the makings of a very difficult day on the track with humidex or heat stress values well into the forties. This heat stress factor was communicated to athletes, coaches, spectators and medical staff by means of flags with colors identifying the current stress factor.



*Mark Donague, AES Met. Tech., raises the black "heat" flag at the Sudbury Junior Games this July.*

Typically, a day would start at 8 a.m. with an amber flag (moderate risk, 18-23 degrees C). It would then graduate to the red flag (high risk, 23-28 degrees C). around 11 a.m., and finally to black (extreme risk, more than 28 degrees C.) from 1 p.m. till 5 p.m. The green flag (low risk, less than 18 degrees C) was rarely if ever seen.

The Sudbury area was in the midst of a heat wave, as was the rest of the province and most of the continent. Some races had to be postponed and many athletes had to be taken to hospital for observation due to heat exhaustion.

However, there were few complaints about the hot weather. AES Weather Office staff got to show their competence and at the same time have a very enjoyable week.

Jack de Corby is OIC  
Sudbury Weather Office.



*Members of AES Communications Directorate (Downsview) recently said farewell to Brenda O'Connor, director of Communications, who is now running communications at the DOE Ontario Office in Toronto. Seen left to right are: Don Scott, Heather Mackey, new acting director and Brenda O'Connor.*





# SAFETY FIRST

"Être attentif, c'est être préventif"

This sign struck my attention as I passed the E.B. Eddy plant in Hull, right across from Terrasses de la Chaudière building. Approximately the words mean: "Attention is the first step on the road to prevention" and they symbolize the spirit which should prevail at all worksites to ensure a safe and healthy environment.

A new higher standard for all Canadian worksites will be in force at the end of October 1988. It is called WHMIS (Workplace Hazardous Materials Information System). Improving the quality of our lives does not stop when we walk through the doors at work; we have to be concerned and take action regarding our safety and health at work. WHMIS will help us.

As of October 31, all employees in Canada, whether in the public or private sector, will be covered under the WHMIS standard. I use the word standard, rather than legislation, for WHMIS is not one piece of legislation. It is more like an umbrella, under which are found a number of statutes and regulations, directives to suppliers and manufacturers, and instructions to employers. The thrust is threefold: Material Safety/Data Sheets, labelling, and employee training. Suppliers will have to supply worksites with data sheets and labels for all products that they supply that fall under WHMIS. And employers will have to instruct their workers in the safe use of those products.

Education is the key to a safe and healthy life. If there are products in your workplace which you suspect might come under the WHMIS umbrella, discuss it with your supervisor. And if you know that you are working with, or in close contact with, a WHMIS-controlled product, ensure that your supervisor trains you in the safe use of that product. We have sent out information to all AES Regions and are conducting an inventory nationally. So get informed! Contact your safety committee, your regional safety contact, or AAG in Downsview for information.

And why not use the suggestion award program to promote ideas which you think could improve safety and health at work? You will be helping all of us, and could be financially rewarded for your ideas. We have a responsibility to ourselves and to our colleagues to ensure that our worksite is safe and healthy. By being attentive, we can prevent illness and accidents.

Jan Glover



**More than 300 people attended the first AES picnic in the grounds of Ross Lord Conservation Park near the AES Downsview Headquarters Building. The event took place on September 21 (the last day of summer) and included such items on its agenda as a catered buffet meal, a mammoth tug of war with 50 people per side, a "memo" leapfrog with several teams trying to deliver a message by leapfrogging over their teammates and something called a "toilet paper mummy wrap". Musicians provided background music and one of the highlights of the show was the amusement provided by Gloria Korson, dressed up as a clown. She is seen here with Linda Stirling, head of the Computer Operational Systems Division, accompanied by her two children, Katie below, and Megan (two) in her arms. Both toddlers had a whale of a time.**



**Left to right: Dr. Jim Young (director), Mrs. F. Fannaki, widow of Dr. Fouada Fannaki, present on the occasion of the unveiling of a plaque in his honor, and All Seasons Award Winners, Don Faulkner, Joe Koralick and Dr. Doug Whelpdale.**



## Air Quality All Seasons Research Award

This year, the Air Quality Research Branch designed a new award, the "All Seasons Research Award". This award will be given annually to AES employees in recognition of significant contributions towards achieving the goals of the Branch.

Nominations can be forwarded to ARQD from anyone within AES anytime during the year. The Air Quality Management Committee will review all nominations received to December 31 and make a final decision before the end of April.

This year, the following employees received awards:

BILL SUKLOFF for his contribution to improving the efficiency of the Branch operations through his development of the Branch Interactive Budgetting System which is now widely used in AES.

DOUG WHELPLEDALE for his advice and guidance to a spectrum of researchers in various fields as well as his well thought out positions to senior management on research and policy issues.

JOE KOVALICK for his long standing dedication to supporting and ensuring the success of many air quality research programs.

DON FAULKNER for his significant contribution to the provision of air quality services to the governments and public of British Columbia over the past 10 years.

# STAFF CHANGES / CHANGEMENT DE PERSONNEL

## Appointments/Promotions Nominations/Avancements

D.K. Dawson (EX) Director General/Directeur général, CCDG, Downsview, Ont.

A.H. Campbell (MT-7) Advisor, Private Sector/Conseiller secteur privé, Downsview, Ont.

K. Wowryk (EG-7) Wea. Office Manager/Gest. Bur. mét., WO4/BM4, Churchill, Man.

M. Law (EG-4) Wea. Stn. Manager/Gest. station mét., WS3/SM3, Lytton, B.C./C.-B.

L. Mainwaring (EG-1) Met. Tech./Techn. en mét., PAEO, Vancouver, B.C./C.-B.

E. Hills (SCY-2) Secretary/Secrétaire, APPA, Hull, Que./Qc

V. Phan (CS-1) Programmer/Programmeur, CMCFM, Dorval, Que./Qc

D. Morrison (EG-7) Supervisor/Chef de service, WO4/BM4, Vancouver, B.C./C.-B.

A. Cantin (MT-5) Meteorologist/Météorologiste, QAEM-CMQ, St-Laurent, Que./Qc

P. Courbin (MT-5) Meteorologist/Météorologiste, QAEM-CMQ, St-Laurent, Que./Qc

H.J. Thoms (MT-5) Meteorologist/Météorologiste, WO4/BM4, Gander, Nfld./T.-N.

D. Steeves (MT-5) Meteorologist/Météorologiste, WO4/BM4, Gander, Nfld./T.-N.

B. Veale (MT-5) Meteorologist/Météorologiste, WO4/BM4, Gander, Nfld./T.-N.

W.L. Ranahan (SM) Supt. Op. Svcs/Surint. serv. d'exploitation, DMETOC, Ottawa, Ont.

I.A. Soule (MT-5) Meteorologist/Météorologiste, AETE, Cold Lake, Alta./Alb.

M. Purves (MT-3) Meteorologist/Météorologiste, CFB, Comox, B.C./C.-B.

G. Trudeau (MT-4) Meteorologist/Météorologiste, CNWC, North Bay, Ont.

A. Ferland (MT-3) Meteorologist/Météorologiste, CFB, Portage la Prairie, Man.

W. Benjamin (MT-5) Shift Supervisor/Surveillant de quart, CFFC, Edmonton, Alta./Alb.

## Transfers/Mutations

A. Green (EG-4) Met. Tech./Techn. en mét., Broadview, Sask.

J. Anderson (MT-5) Meteorologist/Météorologiste, Winnipeg, Man.

B. Emig (EG-1) Met. Tech./Techn. en mét., WS3/SM3, Revelstoke, B.C./C.-B.

P. Morais (EG-1) Met. Tech./Techn. en mét., Vancouver, B.C./C.-B.

D. Pawley (EG-1) Met. Tech./Techn. en mét., WS3/SM3, Cape St. James, B.C./C.-B.

V. Williams (EG-1) Met. Tech./Techn. en mét., WS3/SM3, Cape St. James, B.C./C.-B.

B. Bilodeau (MT-2) Met. Dev. Level/Niv. perf. mét., CMCF, Dorval, Que./Qc

P. Tourigny (MT-7) Meteorologist/Météorologiste, AWDH, Downsview, Ont.

D. Jones (MT-2) Met. Dev. Level/Niv. perf. mét., PWC, Vancouver, B.C./C.-B.

F. Guay (EG-6) Pres. Tech./Techn. en prés., WO4/BM4, Mirabel, Montreal, Que./Qc

N. Raymond (EG-6) Pres. Tech./Techn. en prés., WO4/BM4, Mirabel, Montreal, Que./Qc

G. Coulombe (EG-6) Pres. Tech./Techn. en prés., Cornwall, Ont.

L. Chenard (MT-3) Meteorologist/Météorologiste, Ice Centre/Centre de prévision des glaces, Ottawa, Ont.

M. Vallee (MT-2) Met. Dev. Level/Niv. perf. mét., CFB Greenwood, N.S./N.-É.

J. Milton (MT-2) Met. Dev. Level/Niv. perf. mét., QAEM-CMQ, St-Laurent, Que./Qc

S. Martin (SCY-2) Secretary/Secrétaire, SSD, St-Laurent, Que./Qc

A.M. Valton (MT-2) Instructor/Instructeur, TCTI, Cornwall, Ont.

S. Halliday (CS-2) Programmer/Programmeur, CF METOC, Halifax, N.S./N.-É.

N. Ibey (CS-2) Programmer/Programmeur, CFFC, Trenton, Ont.

W. Pugsley (SM) Supt. Plans, Req. and Training/Surint. Plans, besoins et formation, DMETOC, Ottawa, Ont.

P. Marquis (MT-3) Meteorologist/Météorologiste, CFFC, Trenton, Ont.



## Merry Christmas



## Joyeux Noël



**Temporary or Acting Positions /  
Postes temporaires ou  
intérimaires**

D. Cassidy (CR-4) Clerk/Commis, Archive  
Custodian/Dépositaire archives, CCAS, Downs-  
view, Ont.

T. White (EG-7) Prog. Information Officer/Agent  
d'inf. progr., APEC, Downsview, Ont.

N. Sauvé (AS-7) Admin. Officer/Agent d'ad-  
ministration, APDG, Hull, Que./Qc

C. Hutchinson (CR-3) Clerk/Commis, ASPSP,  
Downsview, Ont.

J. Beal (EG-5) Wea. Ser. Specialist/Spéc. ser-  
vice mét., W04/BM4, Fort Nelson, B.C./C.-B.

R. Coleville (EG-4) U/A Tech./Techn. en aér.,  
WS1/SM1, Vernon, B.C./C.-B.

J. Derham-Reid (EG-5) Wea. Stn. Manager/  
Gest. station mét., WS3/SM3, Cape St. James,  
B.C./C.-B.

G. Drapeau (EG-7) Tech. Computer Instal-  
lations/Techn. inst. informatiques, CMCAT,  
Dorval, Que./Qc

F. Mirecki (EG-5) Wea. Ser. Specialist/Spéc.  
service mét., W04/BM4, Fort Nelson, B.C./C.-B.

I. Fung Fook (SCY-3) Secretary/Secrétaire,  
ACDG, Downsview, Ont.

M. Pratte (CM-6) Comm. Supervisor/Surv.  
communicat., QAEM-CMQ, St-Laurent, Que./Qc

J. Lafontaine (EG-8) Upper Air Projects/Projets  
aérologie, QAEOU/P, St-Laurent, Que./Qc

Y. Belland (EG-8) Upper Air Supt./Surint.  
aérologie, QAEOU/I, St-Laurent, Que./Qc

B. Brunet (CR-3) Clerk/Commis, QAEA,  
St-Laurent, Que./Qc

F. Androschuk (EG-6) Met. Tech./Techn. en  
mét., Bedford, N.S./N.-É.



**Departures/Départs**

A. Auclair, CCAD, Downsview, Ont. to/au  
Canadian Forestry Service Quebec/Service  
canadien des forêts — Quebec

G. Kyle, Victoria, B.C./C.-B.

J. Walker, OAEP, Toronto, Ont. — Education/  
Études

G. Hollingshead, PAE00, Dease Lake,  
B.C./C.-B.

A. Savard, QAEOU, St-Laurent, Que./Qc

M. Zavada, QAEOU, La Grande IV, Que./Qc

J. Brown, Shelburne, N.S./N.-É. to/au Dept. of  
Fisheries and Oceans/Min. Pêches et Océans

J. Samson, CMC, Dorval, Que./Qc to/à Energy,  
Mines and Resources/Énergie, Mines et Res-  
sources

W. Windle, MSRB, Downsview, Ont. to/à Health  
and Welfare Canada/Santé et Bien-Être social  
Canada

**Secondment/Détachements**

L. Funnell, AWPDP, Downsview, Ont. to/à  
APEC, Downsview, Ont.

**Leave of Absence/Congés  
autorisés**

C. Dale, PAECO, Vancouver, B.C./C.-B. —  
Education/Études

D. Newall, PAEWR, Vancouver, B.C./C.-B. —  
Education/Études

G. Leger, Sable Island, N.S./N.-É. — Education/  
Études

**Retirements/Retraites**

T. Collins, OAEWYZ, Pearson Int'l. Airport/  
Aéroport international Pearson, Toronto, Ont.  
June/juin, 1988

J.K. Davis, OAEWYZ, Pearson Int'l. Airport/  
Aéroport international Pearson, Toronto, Ont.  
July/juill., 1988

A. Marien, CMC, Dorval, Que./Qc July/juill.,  
1988

D. Nowell, DMETOC, Ottawa, Ont., July/juill.,  
1988

R. Watson, QAEM-CMQ, St-Laurent, Que./Qc,  
Aug./août, 1988

K.J. O'Leary, CCAA/Q, Downsview, Ont., Sept/  
sept. 1988

D. Bélisle, QAEM-CMQ, St-Laurent, Que./Qc,  
Sept./sept. 1988

**Bonne et heureuse  
Année**



**Happy New Year**

