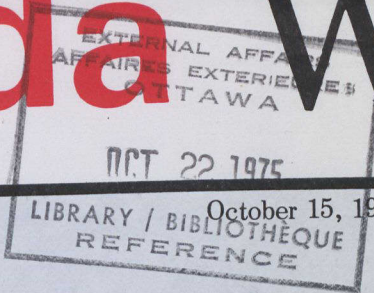


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Mirabel, Montreal's mammoth airport, off to a flying start

Montreal's new international airport, Mirabel, was inaugurated by Prime Minister Pierre Elliott Trudeau on October 4 before some 2,500 guests and officials including Premier Robert Bourassa of Quebec, former Transport Minister Jean Marchand, Mayor Jean Drapeau of Montreal, diplomats, foreign airline officials and Canadian aviation administrators.

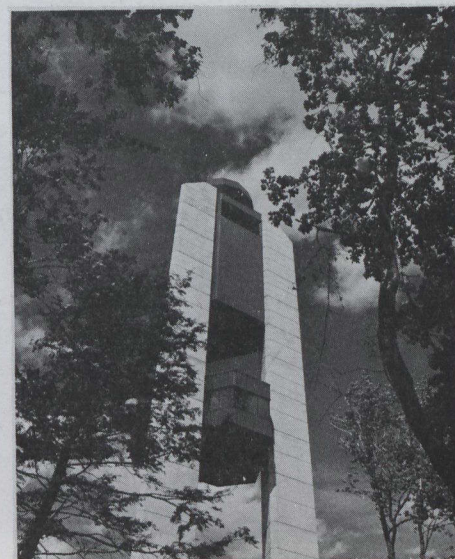
The airport, located 34 miles from Montreal, has been estimated at about \$325 million and occupies the largest land area for its purpose in the world — 138 square miles, or over two-thirds the size of Montreal island. Some 850,000 cubic yards of concrete went into the paving of the runways, taxiways and aircraft aprons — enough to pave a highway from Montreal to Quebec City (160 miles).

Design for the future

Dominated by a 215-foot high control tower, the tallest in Canada, Mirabel was designed not only to meet present needs but, primarily, to satisfy requirements of air traffic into the next century. To do this, sufficient land was acquired for expansion and plans call for integration in the Montreal North Shore area.

Expansions will keep the airport functional until the year 2025. In its first phase, which begins operations on October 26, it is equipped to handle as many as 4,000 passengers an hour and is expected to service some 3.5 million passengers and 500,000 tons of cargo this year.

The Prime Minister said that the far-sighted planning of Mirabel "would preclude the possibility of the site being strangled by urban sprawl", and pledged that the planners would "continue to show respect for the natural and social environment of the surrounding area". Premier Bourassa said that the airport would open "many perspectives on a regional and local level", and that it "would ensure the spread of economic wealth to the outmost reaches of the province", while Mr. Marchand described it as "the most



The 215-foot control tower, which has a triangular base, is the visitor's first glimpse of Mirabel.

complete air service and industrial concept currently in existence".

Gradual transfer from Dorval

Mirabel will take on international flights and associated domestic and transborder traffic on the 17,000 acres that have been reserved for airport operations. The distribution of air traffic for the new facility has been based on a gradual transfer from Montreal's older airport, Dorval, which is expected to reduce Dorval traffic from eight million passengers in 1974 to five million this year. Dorval will continue to handle flights within Canada and the United States. By the 1980s, Mirabel will probably service about 50 per cent of the total air traffic at Montreal.

The plan has been designed to permit the independent expansion of principal facilities — from an initial two runways and one terminal, 1,160 feet by 300 feet, to six runways and six terminals. The two present runways each measure 12,000 by 200 feet and each can support loads of up to one million pounds. Together, the two runways will be able to accommodate as many as 75 aircraft

movements an hour or about 300,000 movements a year.

“Remote” gates

Mirabel planners chose what is known as the “remote gate conception”, which involves total separation between the aircraft and the terminal, with the use of mobile units to transport passengers. It also means that aircraft can move on and off parking stands unaided, that servicing can take place unimpeded by other activities and that all types and sizes of aircraft can be accommodated. The design provides for 18 remote gates which are in groups of six around three service areas on the apron. The mobile units, called passenger transfer vehicles (PTVs) – 14 of which will be in service this year – can each accommodate 150 passengers and travel up to 20 miles an hour. A special system allows the PTV to be elevated to the loading door of any size of aircraft.

For connecting flights, an additional four gates were included in the design – attached as “nose-in” positions at an aeroquay.

Once the aircraft has reached its final stop, passengers will board the PTV and be driven to the deplaning section of the terminal building. Outgoing passengers will be issued with a boarding pass which indicates the number of the PTV boarding sector in the outbound security area. In total, there will be three boarding sectors, each equipped with six PTV loading docks.

All passengers, whether departing or



The terminal complex and commercial administration area seen from the West.

arriving, will follow a straight line through the terminal with no change in level – a walking distance of no more than 280 feet, which is considerably less than prescribed international standards.

Parking

A three-level parking structure measuring 1,200 by 300 feet can accommodate 2,500 vehicles. Other parking facilities consist of a holding area for taxis and buses, which leads to both ends of the processing curb, and lots at either side of the parking structure for terminal employees. Employees and other workers involved in airfield servicing, maintenance and operations, will park in the facilities of their

various employers.

Total parking capacity within the central area has been estimated at 6,000 vehicles.

New de-icing process

Mirabel’s master plan includes the world’s first de-icing station located between the first two runways instead of at individual aircraft parking positions. This will permit recovery of the de-icing fluid as a major pollution-control measure and the fluid will be contained and processed for re-use.

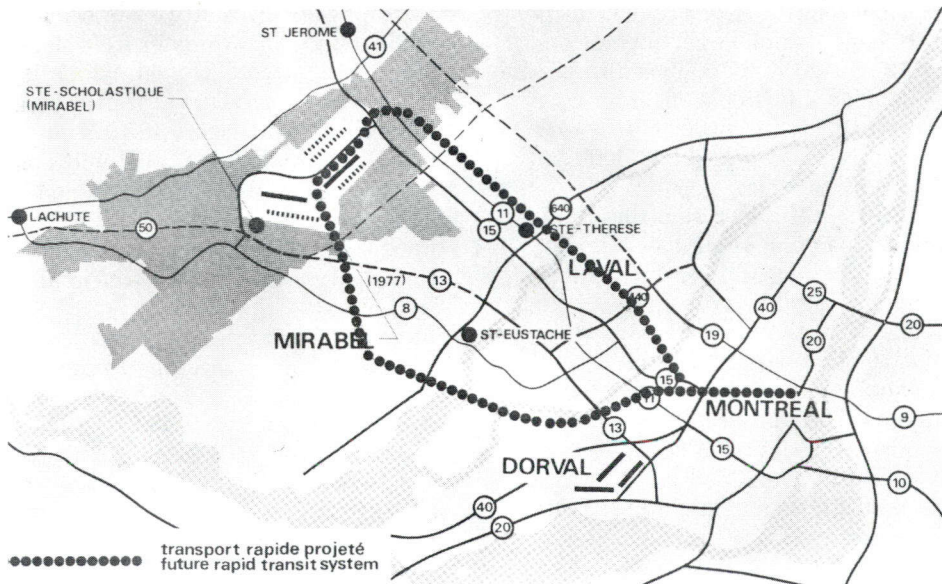
Access to airport

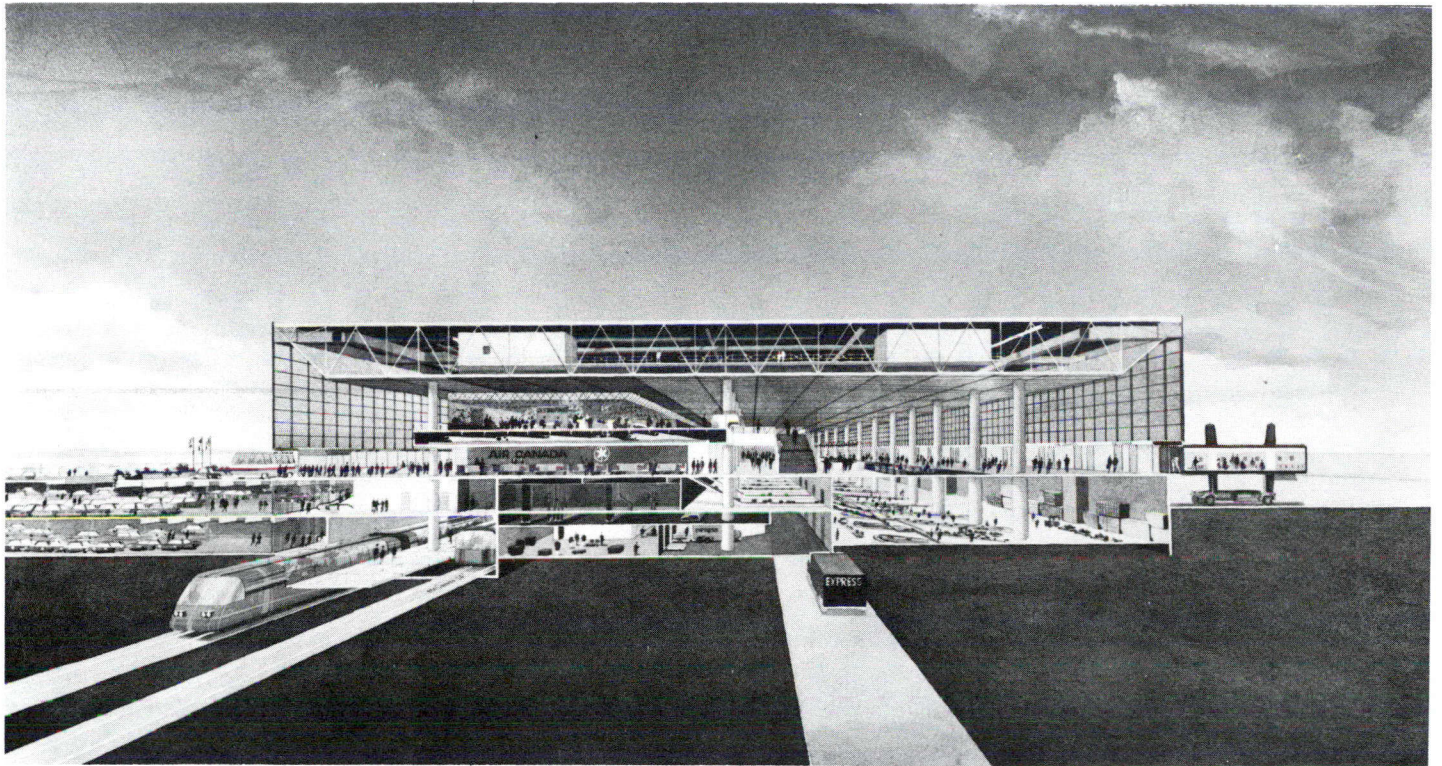
This year, the airport will be served by more than half a dozen highways and a fully integrated public transportation system consisting of more than 30 buses on regularly scheduled runs between Montreal, Mirabel and Dorval.

A rapid transit system will also be installed, about 1980, which will use electric trains capable of speeds of more than 100 miles an hour and cover the distance from downtown Montreal in 30 minutes. The guideways or rails will pass directly through the terminal buildings.

STOL aircraft

Provision has been made to accommodate STOL (short-take-off and landing) aircraft, including if necessary the development of a landing strip 2,000 by 150 feet in the northwestern corner of the airport. STOL facilities would be provided with convenient access to the





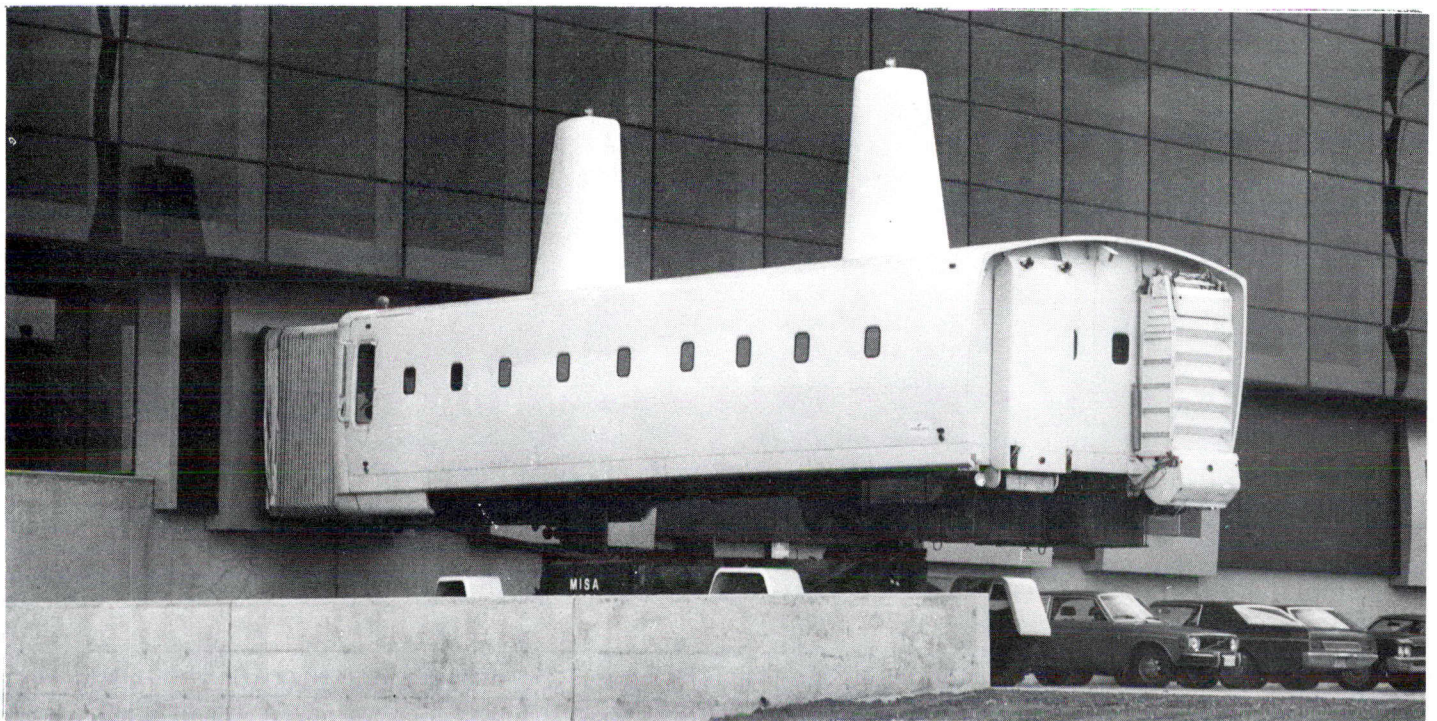
Cross section of terminal building, into which, eventually, rapid transit trains will enter directly. Passengers walk only 280 feet – 130 paces – before being transported to and from aircraft.

passenger terminals and the rapid transit system. If future ground access ever approaches a condition of traffic saturation throughout the region, STOL aircraft could offer an alternative to the surface movement of passengers to

and from the airport. STOL aircraft could also be used to provide connecting flights to and from Ottawa and Quebec City for international traffic.

Mirabel, Montreal's new international airport, will continue to grow over the

next ten, 20 and 30 years. By 2025 six runways, six terminals and a full complement of services spreading over the 17,000-acre site will have the capacity of servicing 60 million passengers and millions of tons of cargo a year.



Passenger transfer vehicle (PTV), which has an elevator system that raises it to the door of the aircraft.

Pulp and paper machinery to Poland

A major advance in trade relations between Canada and Poland was made on September 25 with the signing of a Protocol of Agreement under which Canada's Export Development Corporation will make available up to \$500 million in loans to assist Canadian exporters in the selling of Canadian capital goods, equipment and services to Poland.

Announcement of the signing was made by former Industry, Trade and Commerce Minister Alastair Gillespie and Ryzart Strzelecki, Vice Minister of Foreign Trade and Marine Economy, Warsaw. It provides for loans for transactions involving the purchase of high-technology capital equipment and related services from Canadian pulp and paper manufacturers and engineers.

The first loan agreement under the Protocol, also signed the same day, will involve an EDC loan of up to \$50 million to support the sale by H.A. Simons (International) Ltd, of Vancouver of the design engineering services for a pulp and paper complex for the Government of Poland.

The agreement was concluded during a visit of Polish foreign trade and bank officials to Ottawa.

EDC President John A. MacDonald stated that the agreements would be of tremendous importance to pulp and paper machinery and equipment manufacturers throughout Canada, particularly on the West Coast. "As long as they can compete on the basis of price, quality, and service, they can be assured of the EDC support necessary to enable them to match international competitions," he added.

Canada salutes U.S. bicentennial at All-Star Game

The Department of External Affairs recently announced that Canada had accepted an invitation to take part in the half-time show of the 1976 bicentennial Shrine football game in Palo Alto, California on January 3.

Canada as a close neighbour of the United States will present a bicentennial salute to the people of the U.S. at this traditional "All-Star" game held annually between the Eastern and Western champion college teams. The

contingent of 200 Canadians will be composed of members of the Royal Canadian Police Musical Ride, The Princess Patricia Canadian Light Infantry Band from Calgary, the City of Winnipeg Massed Pipes and Drums and pipers of the Seaforth Highlanders of Canada from Vancouver, British Columbia, and of the Canadian Scottish Regiment, Victoria, B.C.

The profits from the game will be given to Shriners' hospitals for crippled children in both the U.S. and Canada.

Canada is participating in several events in celebration of the U.S. bicentennial during 1976.

Transplantation research

A group of scientists working on transplantation immunology at the University of Alberta has received renewed funding from the Medical Research Council of Canada.

They will receive some \$2.5 million over five years to continue the study of causes of rejection of tissue used in transplant operations.

The transplantation team was established at the University of Alberta five years ago with Medical Research Council funding of about \$1.5 million for the initial five-year contract that ended this year. During that time they generated over 100 papers and presentations.

The aim of the group, which is headed by Dr. J.B. Dossetor and Dr. Erwin Diener, co-directors, and Dr. Thomas Wegmann, is to combine clinical and theoretical research to provide insight into the processes that take place when the body rejects foreign tissue.

"The idea is to integrate the two — to build a bridge between the applied and basic work — to provide a better picture of what takes place," says Dr. Dossetor whose work is largely clinical.

Mixed results

Asked if he were pleased with progress so far, Dr. Dossetor confesses to ambivalent feelings.

"The subject hasn't developed exactly as was originally expected," he says. "Some areas of research have developed well, some not so well — the basic research has gone really well, though."

"The hope five years ago was that

there would, by this time, be a new approach to rejection in man using more specific methods of controlling man's immunity," he explains. "Whereas this has been fairly successful in animals, it has just now reached the point where it may begin to be applied to humans."

"However in other areas, such as tissue typing, there has been quite a lot of advance in ways which we had not anticipated," says the doctor. "One set of factors to do with the cell surface previously known to be important to the rejection or acceptance of transplanted cells has been found to be part of a more complex system — and this has implication for other aspects of general medicine where susceptibility to different diseases, such as multiple sclerosis, is genetically determined."

The team's work in this area has led to work with the Eskimos and the Hutterites — populations that have "pure" cells because they do not have outside genes entering their "gene pool". The Hutterites have been found to be especially valuable as they have kept genealogical records for over a century.

On the basis now solidly established, the group will exploit the new avenues it has opened up and will at the same time look for additional methods of attack in the problems of disease susceptibility and foreign-tissue rejection.

Canada Council program to help Canadian writers

The Canada Council has announced a new program to encourage Canadian publishers to organize promotion tours for their authors through such means as interviews, press conferences and other book-launching events.

The Council, which will pay travel expenses for the tours, will offer, in addition, a fee of \$125 per reading for authors who give public readings of their works during the tour. Other expenses will be borne by the publisher.

The new program is open to all publishing houses that meet the requirements of the publication-grants program. It does not affect the grants already available to art galleries, museums, libraries and post-secondary schools for public readings by Canadian writers of their published works.

Mr. Tourism retires

Dan Wallace, whose name has become synonymous with the spiralling growth of tourism in Canada and whose influence opened new avenues in an industry constantly changing, retired as general director of marketing from the Canadian Government Office of Tourism on September 26.

Mr. Wallace, who celebrated his sixty-fifth birthday on September 27, after a career in tourism spanning almost two decades, left his office with mixed emotions — gratitude for the opportunity to help shape CGOT into one of the largest and most active organizations of its kind in the world, and envy for those who will follow in his footsteps.

After serving as the director of travel and information for his native province of Nova Scotia, he became assistant director of what was known as the Canadian Government Travel Bureau in 1961.

National challenge

"I felt at that time it would be more exciting working in the centre of Canada," he recalled. "I knew the job would offer more of a challenge and I'd have an opportunity to promote tourism for all of Canada."

Working with Alan Field, who was then CGTB director, the pair drew up a five-year program in 1962 leading to Canada's centennial. Their aim was to raise Canada's visitor income to \$1 billion by 1967 and they set out to chart a new course for tourism in Canada and preach its potential at home and abroad. Today, there are 26 field offices located in eight countries, compared to two when Mr. Wallace came to Ottawa. The budget of \$2 million in 1961 has been increased to \$24 million today.

Dan Wallace took over as director when Mr. Field left the post in 1965. The centennial year, highlighted by Expo 67, turned out to be a year of self-discovery for Canadians.

Mr. Wallace is also proud of the "Explore Canada" program launched in 1971, when provinces, territories and private enterprise joined together to encourage Canadians to travel more in "Vacationland Canada". A travel survey released the same year revealed that 72 per cent of the travel industry's



Dan Wallace plays his mandolin at a farewell party given by his colleagues and former colleagues, at the Pineglen Golf Club, Ottawa, on September 25.

income came from Canadians.

"Since 1957, Canada's income from visitors has grown at a compound interest rate of 9.4 per cent," stated Wallace in a recent speech. "In recent years, it is probably that income from Canadians travelling in Canada has grown as fast or faster. If this 9.4 per cent growth continues for the total income of Canada's travel industry, this income would reach \$11 billion by 1980 and \$17 billion by 1985...." Tourism, stated Mr. Wallace, could "help break down regional, national

Managers of 26 field offices abroad were present. The Eskimo carving was one of the gifts to Mr. Wallace on his retirement.

and international barriers to understanding...."

Life member of ASTA

Mr. Wallace, who has represented Canada at international travel conferences on several continents, was elected an honorary life member of the American Society of Travel Agents at a recent meeting in Amsterdam. He joins a select group. Only seven other Society members have been elected honorary life members.

Grant assists training of Asian agricultural managers

A grant of \$248,000 over three years has been made by the International Development Research Centre (IDRC) to assist a group of Asian nations in their efforts to improve and co-ordinate research management and training for agricultural development — an essential step towards self-sufficiency in food.

The research management project announced September 29 by IDRC president, Dr. W. David Hopper, will make a two-pronged approach: identifying, analyzing, and making recommendations for solving management problems in current agricultural research, while concurrently establishing national and regional training programs for both present and future research managers,

thus ensuring the project's long-term effectiveness. The project is co-ordinated by the Southeast Asian Regional Centre for Graduate Study and Research in Agriculture (SEARCA), Philippines.

Many developing countries of Asia have established agricultural research programs in recent years, but the effective management of such research, without which the maximum benefits cannot be realized, is a complex task. Eighteen months ago at a seminar-workshop in the Philippines, delegates from 14 countries recommended that a concerted effort be made to organize their combined knowledge and experience to provide adequate research management leadership for the future.

Countries involved

Nine countries – India, Indonesia, Japan, Malaysia, the Philippines, Taiwan, Thailand, Singapore and Sri Lanka – are participating in the project. A co-ordinator and a national committee formed in each of these countries will organize project activities. Since the beginning of the project in October 1974, several activities have been undertaken. A survey of research management problems from three categories – top managers, middle managers, and researchers – is already in progress in the participating countries. Along with the survey, case studies dealing with specific research management aspects are being prepared by local experts. The first two-week training course for middle-level research managers was held last month, at SEARCA, Philippines.

UN agency chooses McMaster professor as consultant

A United Nations agency has invited a McMaster University professor to meet in Vienna with experts from the United States, Britain, France and Austria as a consultant on neutron radiography. Dr. A.A. Harms, chairman of the Department of Engineering Physics at McMaster, said that his selection by the UN's International Atomic Energy Agency was in recognition of his research on neutron radiography and its increasingly important role in education, industry, medicine and research.

The five scientists will meet November 17 to 19, to discuss the advisability for the United Nations to become more active in the use of nuclear-research reactors for neutron radiography on behalf of the developing countries.

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Algunos números de esta publicación aparecen también en español bajo el título Noticiario de Canadá.

Ähnliche Ausgaben dieses Informationsblatts erscheinen auch in deutscher Sprache unter dem Titel Profil Kanada.

X-rays are used usually to "image" the interior of a given subject whether it be human or not. Neutron radiography experimentation by Dr. Harms and his students has shown that this kind of imaging is more selective, and that neutrons will pass through some materials that stop X-rays, such as lead. Neutrons, however, go through photographic film without leaving a mark. Dr. Harms has been working on the mechanism of visual-image formation after the neutrons have passed through the object.

Because of the professor's work, McMaster students can do simple neutron radiography experiments even though advanced research is still under way. McMaster's nuclear reactor supplies neutrons for these studies. Another application was work done by Dr. Harms under contract for a private firm which called for a look inside electronic components for the United States space program. Neutron imaging gave much more detailed views than X-rays could. In their subsequent use in satellites it was found that the components performed with complete reliability.

Canada popular choice for European holidaymakers

The volume of tourist traffic from Europe to Canada so far this year is exceeding expectations made earlier against a background of rising inflation and general economic downturn.

Figures issued by Statistics Canada for the first five months of 1975 show a net increase of 17,111 or 9.3 per cent in the number of Europeans visiting Canada, compared with the figure in the same period last year. Totals were: 184,213, against 201,324.

Ontario was the most popular destination among the provinces for European holidaymakers. Numbers were up from 101,207 to 109,428 – a net gain of 8,221 or 48 per cent of the total Canada increase. The province accounts for over 54 per cent of overseas visitor traffic to Canada.

Britain continues as the largest single source of tourists – some 80,849 arrived at Canadian destinations during the period, up by 7,716 from 73,153 a year earlier. Germany and the Netherlands were the next largest sources of European visitors.

Chair of Canadian Studies inaugurated at Edinburgh University

The Secretary of State for External Affairs Allan J. MacEachen, and the Canadian High Commissioner, in London, Paul Martin, will attend the inauguration of a Centre and Chair of Canadian Studies at Edinburgh University on October 21.

Four days of activities are planned to mark the occasion, including an exhibition on the Canadian Arctic, films, a Canadiana display, a commensal dinner, an exhibition on the law of the sea, and a ceilidh with Scottish and Canadian performers.

Peach pit products

An agricultural nuisance has been converted into an industrial raw material in British Columbia.

Peach and apricot pits used to be a waste-disposal problem for Western canning companies before Agriculture Canada's Research Station at Summerland, British Columbia, found that they could be ground and used as an abrasive for the "mud" needed in drilling oil wells.

Imported walnut shells from California were used formerly, says John Kitson, a scientist at the research station.

Pits from the canning industry are shipped to a nearby factory, where they are cleaned, dried, cracked and the kernels extracted. The stony pericarps (similar to walnut shells) are ground and added to the mud used by drillers when they encounter porous rock.

Within a year or so, the kernels may be used to produce oil for cosmetics and also a salad oil. It is of high quality, rich in Vitamin E.

Two extraction methods are commonly used. The coarse pieces of kernel are put through a grinder and then pressed. After 15 per cent of the kernel weight is removed as oil, the pressed cake can be treated with a solvent such as petroleum ether. An extra 10 per cent of the weight can be recovered as oil with this method.

The remaining pulp is a good source of vegetable protein which can be used for animal feed after a bitter-tasting component, amygdalin, is removed.