Mr. Fox noted the long history of close co-operation and friendship between the government of Canada and NASA that began with the design and launch of *Alouette* from California in September 1962 and continues today with projects such as the CANADARM. "It is particularly significant that the first commercial satellite payload carried aboard by the space shuttle this November will include Telesat Canada's *Anik-C3* communications satellite," Mr. Fox said.

Pointing to the vital role space technology has come to play in broadcasting, communications, search and rescue, surveillance, defence and remote sensing, Mr. Fox paid special tribute to the Canadian men and women whose foresight carried Canada into the space age with *Alouette* 20 years ago.

Alouette the leader

"Alouette changed this country's perception of the world around us and our place in the world," Mr. Fox said. "It expanded our horizons and our confidence in ourselves. For our young people in particular, it was a sign of great promise. At a time when we were beginning to realize the serious implications of a growing brain drain, Alouette showed young Canadians that it was possible to pursue a career in this country at the leading edge of scientific research and applied technology."

Today, Canada is one of the few nations capable of supplying complete commercial communications satellites systems to the world market, Mr. Fox said. He noted the recent announcement that the government of Brazil intends to buy two satellites and related support systems and services from Canadian companies. "This project would be worth nearly \$160 million over three years and create some 2 850 person-years of employment in Canada," the minister said.

Mr. Lamontagne noted that Alouette was developed by a team of experts at the Defence Research Telecommunications Establishment (now the Communications Research Centre). "This was a major milestone in Canada's space program, and with it, Canada became the third country in the world to design and manufacture a satellite.

"Since then, there have been many space programs in which National Defence has been involved and has played a leading role. These include experimental and developmental activity by our defence scientists here at Shirley Bay on communications, space-borne imaging radars, and satellite-aided navigation. All of them have involved co-operation with other countries."

International co-operation

The most recent example of successful co-operation, Mr. Lamontagne said, was the COSPAS-SARSAT search and rescue project which, in September, helped save the lives of three Canadians whose light aircraft crashed in British Columbia. The COSPAS-SARSAT project involves co-



Guests at the celebration marking the twentieth anniversary of the launch of Alouette 1.



American General James Abrahamson announces guidelines for Canadian personnel aboard shuttle.

operation among Canada, the US, France, the USSR and several other countries. Canadian technology and equipment plays an important part in the international search and rescue network, the minister said.

Mrs. Erola described the important economic benefits arising from the Canadian space industry through new remote sensing techniques. "With the combined efforts of government and industry, and with co-operation from other countries, Canadians are receiving and using information about the country's landmass that was not only unavailable but unheard of just a few years ago," Mrs. Erola said. "Remotely sensed imagery can be used to monitor agricultural crops for more effective marketing and improved productivity. It can give geologists new clues in the search for minerals, and help foresters protect and regenerate our timberlands. It is providing northern mariners with accurate information on the location and extent of dangerous icefields."

To commemorate the anniversary of the lauch of *Alouette*, the Department of Communications have announced publication of *Spacebound*, a 188-page book on the history of the Canadian space program written by Theodore R. Hartz and Irvine Paghis. The department has also assembled a special multi-media exhibit on Canada in Space, which will tour several Canadian cities.