

experiments will be distributed freely throughout the circular area confining the various projects.

MAIN OBJECTIVES

The experiments will be used to study:

- (1) Further fundamental aspects of air-blast and ground-shock (Australia, Britain, Canada and the U.S.A.)
- (2) Cratering (Canada and the U.S.A.)
- (3) Thermal pulse effects (Canada and the U.S.A.)
- (4) The response of structures and items of military and civilian equipment to air-blast and ground-shock (Britain, Canada and the U.S.A.)
- (5) The behaviour of air-blast within structures such as the ducting system of Canadian destroyer escort vessels (Canada and the U.S.A.)
- (6) The long-range propagation of sound waves (Canada and the U.S.A.)
- (7) Blast effects on man-like dummies in the open and in shelters (Canada and the U.S.A.)
- (8) Meteorological studies (Canada and the U.S.A.)
- (9) Electric-field measurements (Canada - University of Western Ontario)
- (10) Measurement of gravity waves in the atmosphere (Canada - University of Saskatchewan)
- (11) Long-range seismic study (Canada - University of Alberta).

Some 130 Canadians, both military and civilian, will be involved. The small British group will number five and a large number of U.S. scientists will participate.

CANADIAN PARTICIPANTS

The Canadian Armed Forces will take part in the trial by exposing some vehicles and other items to the blast.

In addition to the Canadian Armed Forces the Emergency Measures Organization, Canada's Meteorological Services and three Canadian universities will be represented.

The charges employed since the program's beginning in 1956 have ranged from a few pounds to 500 tons. This year's 500-ton trial, to be conducted at the DRES Watching Hill Range, will provide the measurements required for the individual experiments. Scaling techniques will make possible estimates of likely injuries to individuals and damage to equipment in target areas from nuclear weapons of various yields. These extrapolations will be based on the effects recorded.

The detonation of the spherical shaped charge will be equivalent in its shock and blast effects to a tactical nuclear explosion. DRB officials emphasize that "because the DRES experiment involves a chemical explosive only, radioactive fallout cannot possibly develop".

The Alberta experimental station, which covers approximately 1,000 square miles of relatively flat prairie terrain, is ideally located for such large-scale experiments because of its isolation. Its ranges,

developed for the continuing program, have been built up with power supplies, bunkers, junction boxes and a combine to make the site one of the most flexible test ranges in the western world.

CANADA-U.S. TRANSPORTATION STUDY

Transport Minister Donald Jamieson and the Secretary of Transportation of the United States, John A. Volpe, recently signed in Ottawa a memorandum of understanding calling for closer cooperation between the U.S. Department of Transportation and the Canadian Ministry of Transport.

The aim of the agreement is to encourage cooperative research and development in order to solve common transportation problems.

Identified in the memorandum as the initial subjects of mutual interest are: V/STOL transportation (vertical and short take-off and landing) demonstration and certification; high-speed ground transportation in inter-city corridors; air-traffic control and airways navigation equipment development; forecast of transportation requirements; transportation safety in all modes.

The operation of the St. Lawrence Seaway was also discussed. Increasing the scope of the joint research and development effort will be discussed at a future date.

MUSIC OF THE WORLD

Man and His World 1970 has, for the first time, a pavilion devoted exclusively to music. The exhibition, which is now in its fourth year, is held on the site of Expo 67 in Montreal from June 12 to September 7.

"Music of the World" occupies the former Pavilion of Judaism and treats music through six themes.

The development of musical instruments from the ancient ram's horn to the latest electronic devices is illustrated by the instruments themselves and by music they are capable of producing.

There are ancient folk instruments, horns and later brass, reeds, the clavichord, the harpsichord, the spinet and the pianoforte, the violin, lute and guitar groups, woodwinds and percussion instruments.

The workings of an organ is explained in a display of an enlarged model of an organ. Bulbs, which illuminate the different parts and operations, show visitors how a modern organ works.

The religious spirit in music shows the evolution of the Judeo-Christian musical tradition from cantatas, oratorios and symphonic works to the modern folk mass. Music's role in rituals, customs, ceremonies and festivals is also shown.

How folk music began with the troubadours and ballad singers of France and England and ended up as the dominant sounds at North American folk festivals is also shown in this new pavilion.