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BIG "YEAR" OPENED JULY 1

On July 1, 90 years after Confederation, Canada joined 56 other nations of the world in launching the most extraordinary scientific adventure ever undertaken. This is the International Geophysical Year (IGY), when measurements will be taken all over the earth on such phenomena as glaciers, ocean currents, the upper atmosphere, the aurora, meteors, the earth's magnetism, and the sun's radiation. From a world wide scale of measurements scientists hope to find answers to many questions about the earth and its natural forces.

Improvements are likely to follow in weather forecasting, in long-distance radio communications, in navigation and air travel, in world mapping and surveying, in exploration for oils and minerals. The IGY will lead to other benefits which cannot yet be predicted. Much new knowledge about man's physical environment will be put together for future uses.

The "Year" will really extend for 18 months to the end of 1958, and several of the studies will continue beyond the official closing. Total costs of the IGY are estimated at several hundred millions of dollars; direct and indirect expenditures may run to $2 billion. Overall costs of the United States programme may reach $500 million; and Russian activities are of comparable size.

More than 5,000 scientists will take part in the Geophysical Year, supported by thousands of technicians, service personnel, pilots seamen and mountaineers. Ships will cruise remote oceanic areas taking measurements of currents, the ocean floor, the earth's magnetism and gravity. Balloons and aircraft will be used to explore high levels of air from the Arctic to the Antarctic and around the band of the equator. Expeditions in Both polar regions will investigate glaciers, tides, the aurora, cosmic rays, and earth tremours. All over the world rockets will carry instruments 50 to 160 miles high into the mysterious layers of the ionosphere, to radio information back to earth about temperatures and winds, air pressures and the sun's activity. Most spectacular of all, the Americans and the Russians plan to launch artificial satellites, "man-made moons" which will be shot beyond the earth's atmosphere into the dark vacuum of outer space. If successful, the satellites will tell scientists many things they wish to know about the sun's full radiation, about meteoric dust in space, about the size and shape of the earth itself.

Canada is one of the largest and most significant areas of the IGY, with land bordering on three oceans, with broad areas in the Arctic, and lying under the maximum zone of the Northern Lights. About 80 stations in Canada, from coast to coast and extending to within 500 miles of the North Pole, are now ready for the big task. Many of these are regular weather stations which are now equipped to handle additional measurements.

Final details of the Canadian programme have just been issued by the Canadian National Committee for the IGY. This Committee was or-

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