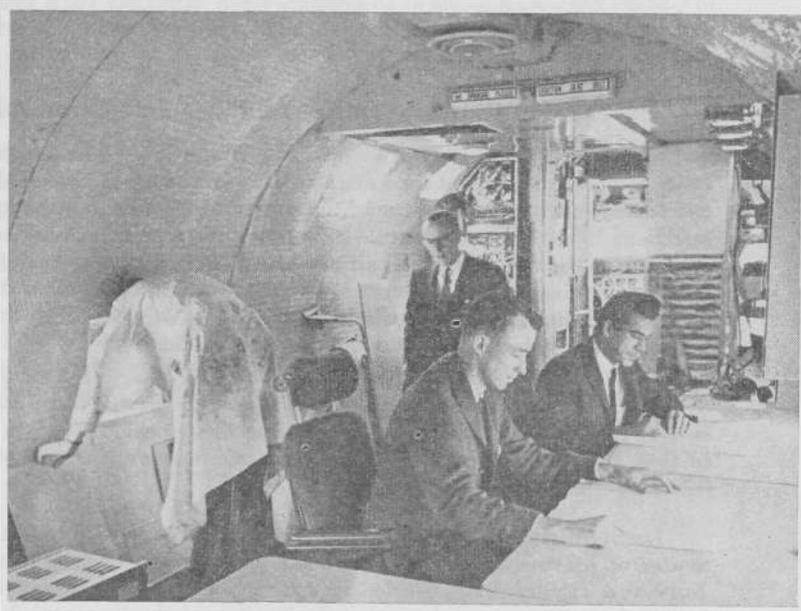


## Section 2.—Meteorological Observing Stations

In January 1966, official meteorological observations were taken and recorded at 2,313 weather reporting stations in Canada. There are several different classes of stations ranging from the first-order reporting stations at airports where hourly observations of all aspects of the weather are recorded, to the co-operative observing stations where a volunteer observer makes daily observations of rainfall, snowfall and temperature or precipitation only. While there are vast areas of the country where the weather stations are several hundred miles apart, most of the settled parts of the country are represented by first-order hourly reporting stations every 100 miles or so, and by co-operative climatological observing stations at least every 25 miles.

At most of the 274 first-order synoptic stations complete weather observations are made every six hours and at a large percentage of them only slightly less complete observations for aviation forecasts are made every hour. These weather data, including information on temperature, precipitation, pressure, wind, humidity, cloud and visibility, are sent first by radio and teletype to the different weather offices across the Continent to be used for weather forecasting purposes, and then at each month-end the manuscript reports are sent by mail to Meteorological Branch Headquarters for use in compiling climatic statistics. At 101 of these observing stations, personnel of the Telecommunications Branch of the Department of Transport take weather observations as part of their scheduled duties, and 28 stations are operated in a similar manner by the different Armed Services; 93 stations are operated by Meteorological Branch personnel and the remainder are operated under contract, or by co-operative arrangement with various transportation and communications companies.



A specially designed transport aircraft, recently placed in service by the Basic Weather Division of the Meteorological Branch, Department of Transport, is opening a new era in air reconnaissance of ice conditions in the Arctic; the aircraft, with another to be added later, will place Canada in the forefront in this field.

The Canadian project is being undertaken with a view to improving summer navigation in the Arctic, winter navigation on the St. Lawrence River and Gulf, and Great Lakes navigation during freeze-up.