

network of 31 radiosonde stations (including five in the extreme Arctic operated jointly with the United States) taking upper air soundings, 71 stations recording upper winds and 1,387 climatological stations. One ocean weather station taking weather observations every three hours in the Pacific, 1,000 miles west of Vancouver, is maintained under international agreement.

**Air Industries and Transport Association.**—Commercial flying schools that are members of the Air Industries and Transport Association numbered 35 at the end of 1955. During 1955 the number of students instructed and graduated as private pilots was 498, the number graduated as commercial pilots was 109, and the number of instructional hours flown was 40,900.

**Royal Canadian Flying Clubs.**—At the end of 1955 there were 38 flying clubs connected with the Royal Canadian Flying Clubs Association. The total membership was 7,765 and the aircraft available for instructional purposes numbered 143. During the year 1,120 students were instructed and graduated as private pilots and 83 as commercial pilots. Instructional hours of flying totalled 82,596.

**International Air Agreements.**—The position of Canada in the field of aviation as well as its geographical location makes imperative co-operation with other nations of the world engaged in international civil aviation. Canada took a major part in the original discussions that led to the establishment of the International Civil Aviation Organization (ICAO) which has headquarters at Montreal, Que. A special article on The International Civil Aviation Organization and Canada's Participation Therein appeared in the 1952-53 Year Book, pp. 820-827.

In recent years Canada has been a signatory to agreements concerning civil aviation with Australia, New Zealand, Belgium, Denmark, France, Ireland, Japan, Mexico, the Netherlands, Norway, Peru, Portugal, Sweden, the United Kingdom and the United States.

## Section 2.—Air Services

**Air Transport Services.**—These services are grouped into two broad classes—Scheduled Services and Non-scheduled Services. The first group provides regular point-to-point service on scheduled advertised routes and the second group includes:—

- (1) Specific Point Services from a designated base to specific points on the basis of unit rates that may be undertaken as the traffic warrants and that are not on a time schedule;
- (2) Chartered Services operated on the basis of the private chartering of an entire aircraft for a specific trip;
- (3) Contract Air Services which operate on one or more specific contracts—these do not operate on a time schedule nor need the contractor take the entire space of the aircraft; and
- (4) Specialty Air Services concerned with large-scale forestry and utility surveys according to some specific agreement.

**Trans-Canada Air Lines.**—During 1956, TCA flew 1,191,784,000 passenger-miles, carrying 2,072,912 passengers. Ton-miles of air freight totalled 11,928,000, air express 2,548,000, and mail 8,613,000. In April 1955, TCA began operation of Viscount aircraft, being the first airline in North America to place turbine-propeller aircraft in service. Orders have been placed for four Douglas DC-8 jet airliners for use on long routes and 20 Vickers Vanguard, large propeller-turbine aircraft, for medium-range operations, the objective being an all-turbine powered fleet by 1961.

At the end of 1956, TCA employed 8,788 persons, had a fleet consisting of nine Super Constellations, 18 Viscounts, 21 North Stars and 24 DC-3's, flying 25,187 route-miles and serving more than 60 communities in Canada, as well as points in the United States, the British Isles, France, Germany, Bermuda and the Caribbean Islands.