

NOTES AND REVIEWS

U.S. AIR FORCE WEATHER RECONNAISSANCE FLIGHTS
TO THE NORTH POLE

[Summarized from notes in the *Bulletin of the American Meteorological Society*, Vol. 28, No. 7, 1947, p. 329; *Arctic Circular*, Vol. 1, No. 5, 1948, p. 46-48; and *Popular Mechanics Magazine*, Vol. 90, No. 5, 1948, p. 97-101, 262 and 264. It has not yet been possible to obtain official information on these important flights.]

Occasional weather reconnaissance flights by United States aircraft to the North Pole began early in 1946. The usual route, known as "Ptarmigan", was from Ladd Field, near Fairbanks, direct to the North Pole by way of Point Barrow and return. In March 1947 a Boeing B-29 Superfortress, commanded by Brigadier-General D. N. Yates, Chief of the Air Weather Section of the United States Army Air Force, covered the 3200-mile route in 16½ hours. In the summer of 1947 regular flights were made by weather reconnaissance aircraft every few days. Towards the end of 1947, after the establishment of the joint Canadian-United States weather stations known as Eureka, Resolute, Isachsen and Mould Bay,¹ the "Ptarmigan" route was changed in favour of "Ptarmigan B", from Ladd Field to the North Pole, either via Point Barrow or via Aklavik and Mould Bay (Prince Patrick Island), and return, the route being followed in a clockwise or anti-clockwise direction according to the weather. Since 1948 flights have been made on alternate days by aircraft of "A" Flight, No. 375 Reconnaissance Squadron (V.L.R.) Weather, commanded by Lieutenant-Colonel Karl T. Rauk, U.S.A.F.

The type of aircraft used is the Boeing B-29, stripped of armament and turrets and fitted with additional fuel tanks to carry some 8000 gallons of gasoline. The round trip of 3600 statute miles is usually covered in about 17 hours. A height of 10,000 ft. is maintained over the whole route. In addition to the normal crew of a B-29, consisting of a pilot, co-pilot, navigator, wireless operator, flight engineer and flight mechanics, it is usual to carry on these flights one or more radar operators. In addition, one or even two extra navigators are carried, because although radar equipment is useful for navigating along part of the route, frequent astronomical observations are necessary for checking the course and obtaining fixes over the polar pack.

The meteorologist, in the nose of the aircraft, makes observations of temperature, humidity, pressure, amount and type of cloud formation, turbulence, precipitation and visibility. The navigator provides the latitude and longitude references for each set of readings, and observes wind velocity. Observations are made every 30 minutes during the flight and are at once transmitted in international code to Ladd Field or an intermediate station, and distributed from there by teletype to weather stations throughout the world.

¹ See the *Polar Record*, Vol. 5, No. 40, 1950, p. 602-03.