

1963-1964

In preparation for the International Year of the Quiet Sun, an international network of stations began full operation, using forward-scatter propagation techniques to study variations in cosmic radiation. At several stations in Antarctica towers 55 m high were built to carry antenna assemblies.

The first winter flight to and from the Antarctic continent was made in June when a U.S. Navy plane flew to McMurdo to pick up an injured man and fly him to New Zealand. A fire at Hallett Station in March ended the upper-atmosphere scientific program, but the station continued operation on a limited basis. During the 1963–1964 summer a flight was made from Cape Town to McMurdo via the South Pole.

The United States began a study of seals, using diving equipment and depth recorders to observe their underwater behavior. Three Weddell seals were brought to a United States aquarium.

A general survey of the South Sandwich Islands was carried out in March 1964 by the British Antarctic Survey and Britain's Royal Navy. Shipbased helicopters were used for photography and to land geologists and biologists on the islands. A preliminary reconnaissance expedition to the Balleny Islands was carried out by New Zealand and United States scientists transported by icebreaker from McMurdo Sound.

The United States withdrew from Wilkes Station after five years of cooperation with Australia. The station was turned over to Australia.

Glaciological traverses were carried out from Vostok to Mirnyy (USSR and France), from Vostok to Molodezhnaya (USSR), and from Byrd to the Ellsworth and Pensacola Mountains (USA).

The Dutch and Belgians jointly established a station near the original Roi Baudouin base on Princess Raghnild Coast in January; it had been closed since 1961. This marked the first Dutch entry into Antarctic research.

In 1964 several nations for the first time since signing the treaty in 1959 exercised the guaranteed right of inspection of all areas of the Antarctic continent.

1964-1965

Upper-atmosphere physics programs were emphasized this season because it was the International Year of the Quiet Sun.

The United States finished the first leg of a traverse into virtually unexplored areas of Queen Maud Land. At the 'Pole of Inaccessibility,' the site of an unoccupied Soviet research station, vehicles were stored for the winter, and the party returned to McMurdo by air.

A new United States research station, Palmer

Station, was established on Anvers Island. Argentina inspected the station under rights granted by the Antarctic Treaty. At Byrd Station construction of the world's longest antenna, a 34-km-long wire on top of the ice sheet, was finished.

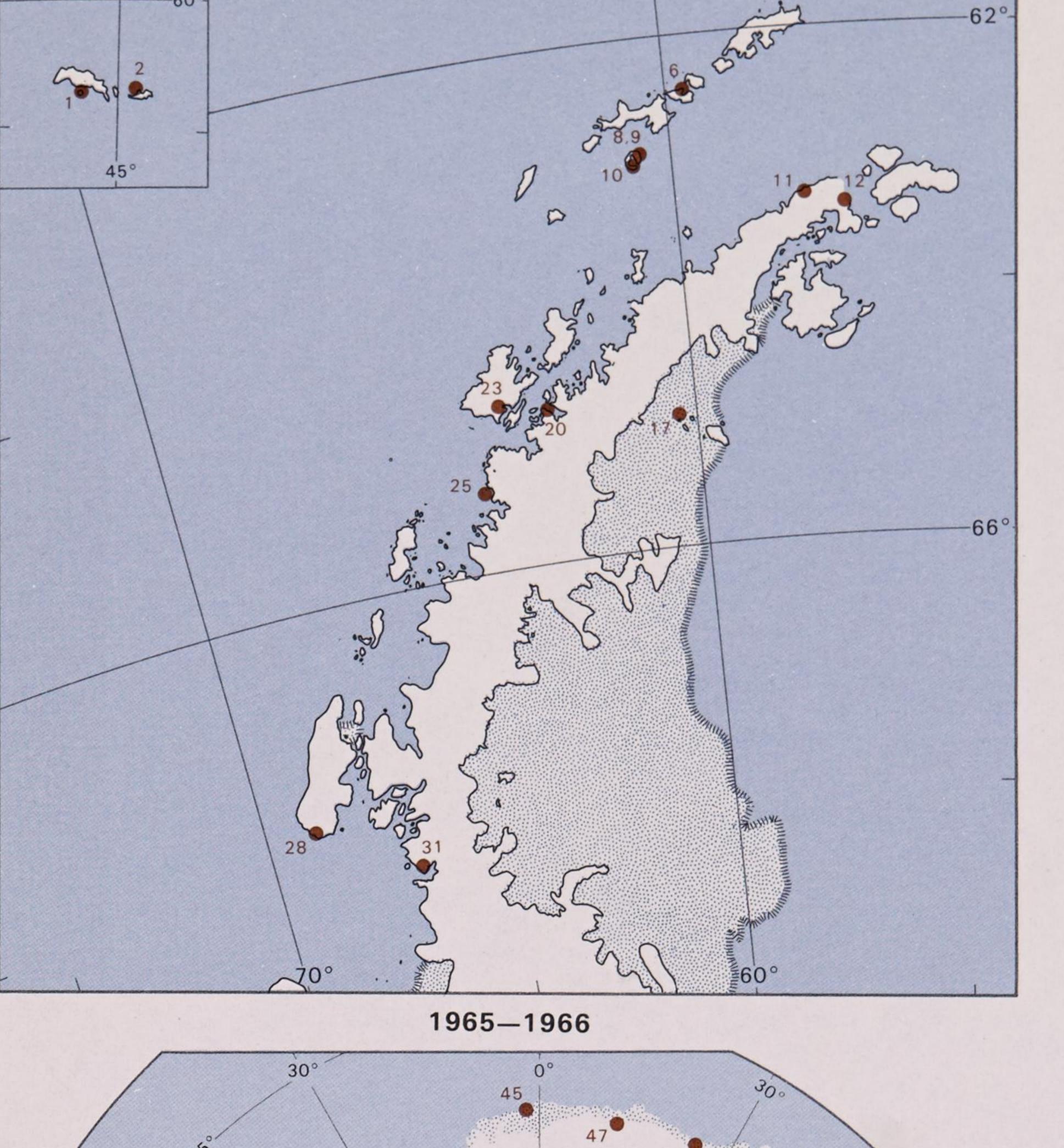
At McMurdo Station, the United States Navy built a seawater distillation plant, and completed construction of the first Antarctic road. The U.S Navy made a record-making flight from Melbourne to Byrd Station, and the longest exploratory flight yet made within the Antarctic continent: a round trip from McMurdo across Queen Maud Land to the Sør Rondane Mountains, to the western extensions of the Shackleton Range.

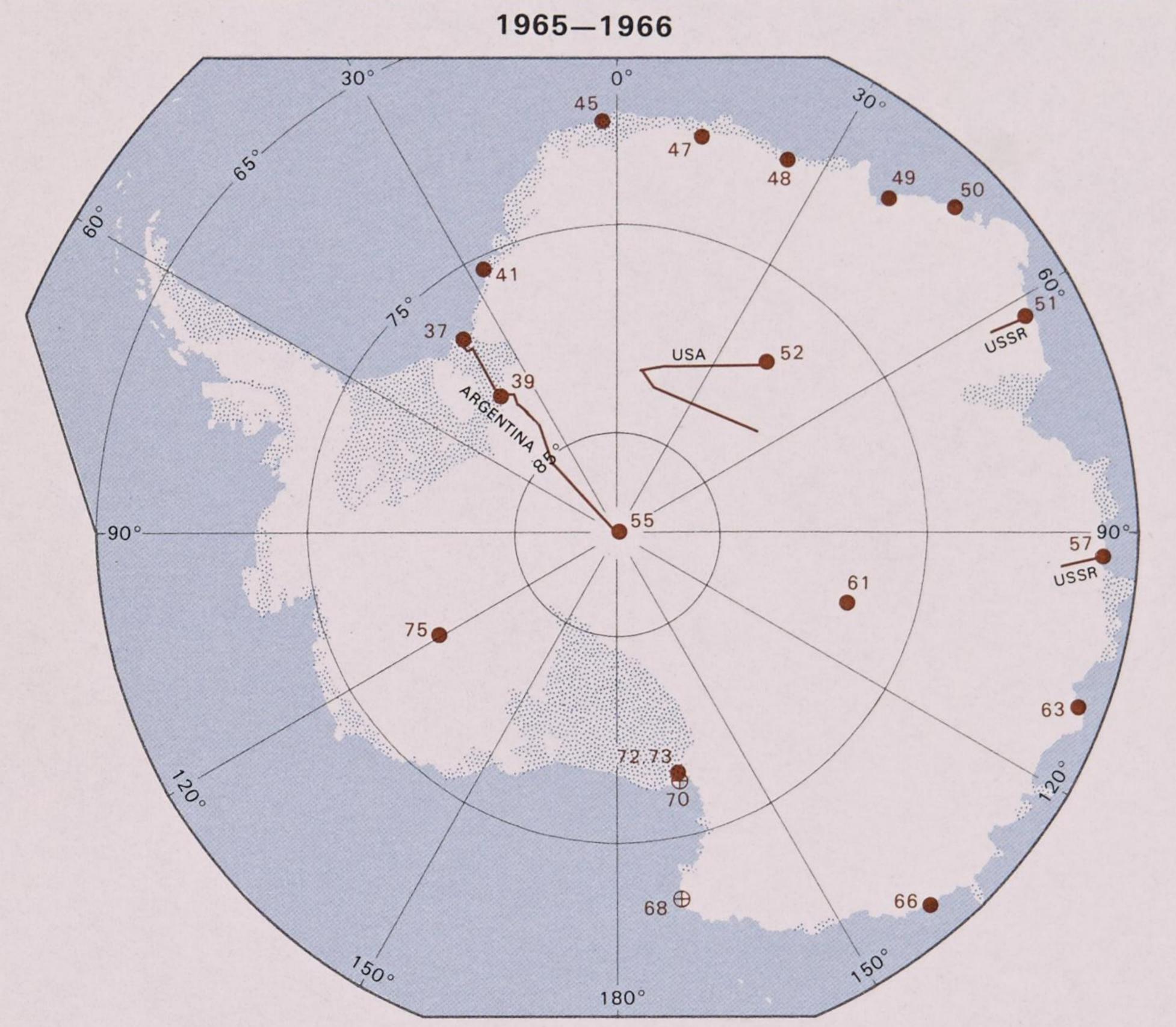
The main Soviet base, Mirnyy, built in 1956, was now almost buried in snow. As a result, many Soviet activities were moved to Molodezhnaya.

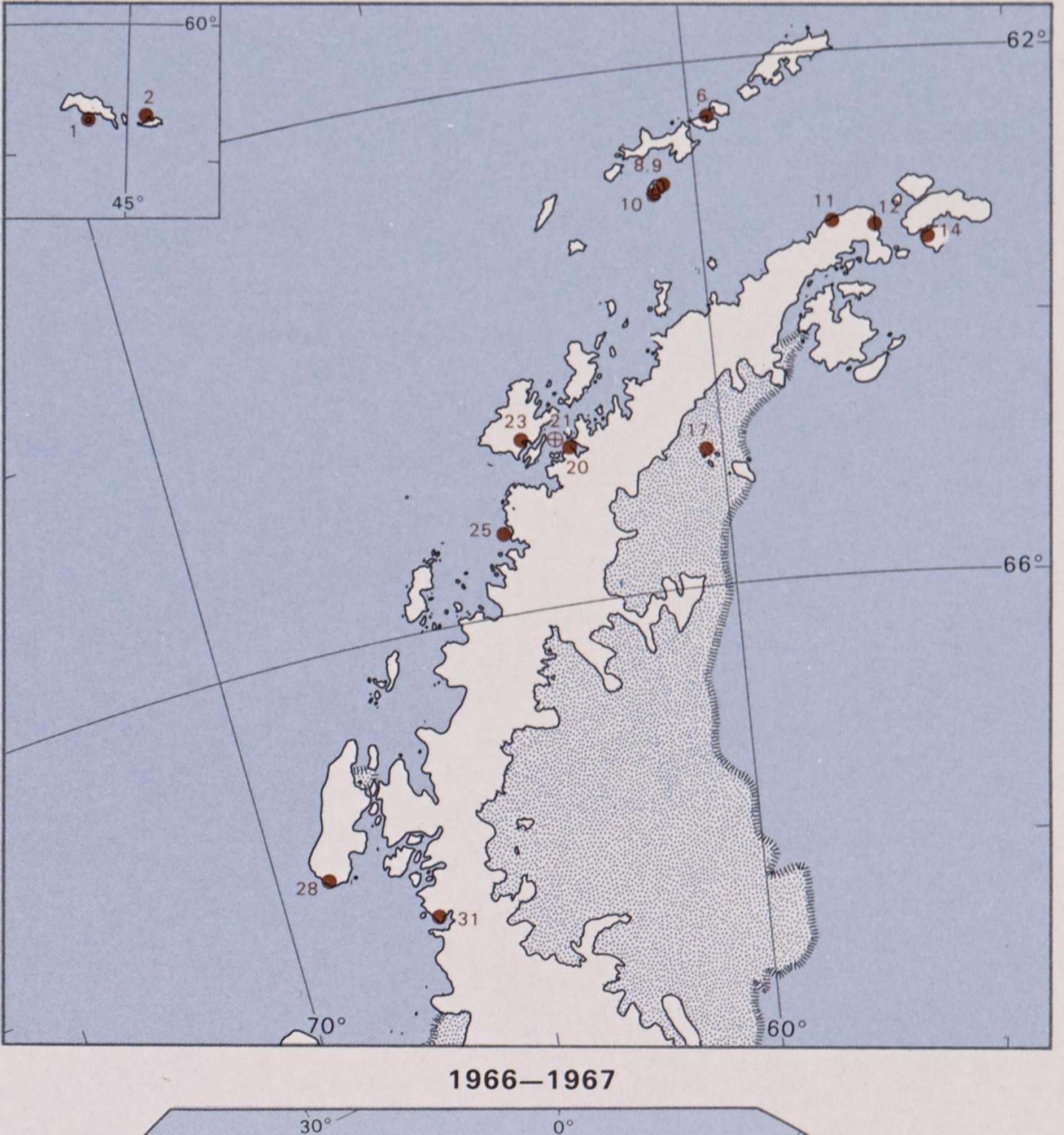
New Zealand and United States scientists again visited the Balleny Islands; this year a detailed study was carried out, including a survey of the coastal waters

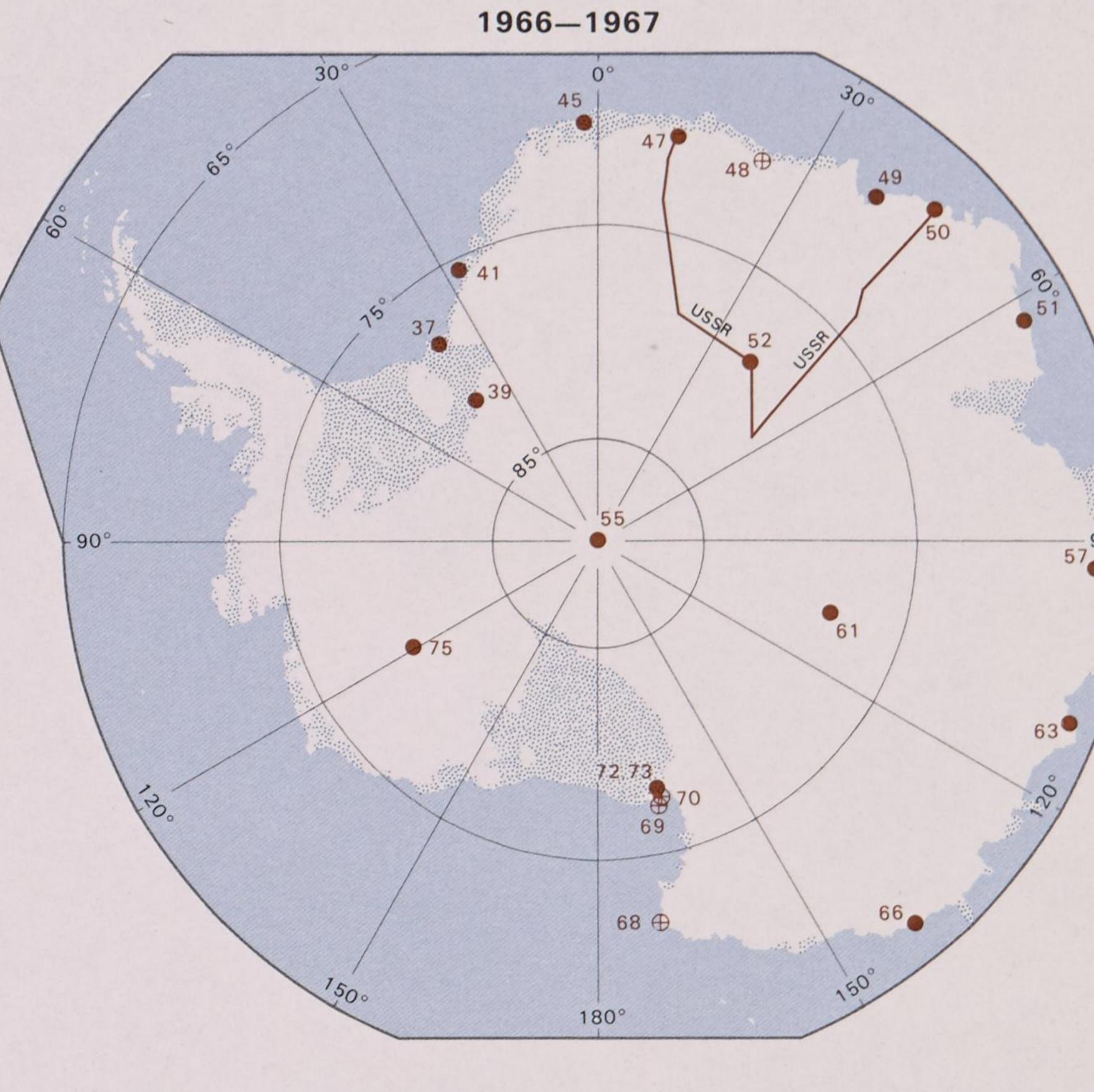
The United States program introduced an observation chamber for biological research in the waters beneath the Ross Ice Shelf.

At the end of the summer, Hallet Station, built in 1956-1957 and operated jointly by the United States and New Zealand, was reduced to the status of a summer station without New Zealand participation. A fire had destroyed the main scientific building in March 1964.









A year is taken to be a summer and the winter following; for example, 1954–1955 designates summer 1954–1955 and winter 1955.

1965-1966

A small station, named Plateau, was set up this season by the United States high on the polar plateau. It served as the terminus of the second phase of the Queen Maud Land Traverse and as a winter station for meteorological, ionospheric, and medical research.

Eights Station, which had been operated primarily for studies in connection with the International Year of the Quiet Sun, was closed.

The world's longest antenna, installed near Byrd Station the previous summer, was tested and enlarged. All countries were invited to propose experiments for its use.

The Japanese station, Showa, closed since 1962, reopened with the help of the newly built ice-breaker Fuji. Australia continued construction—begun the preceding summer—of new buildings for Wilkes Station. The buildings had been buried in snow which had accumulated over the years. The French built a rocket launching ramp at Dumont d'Urville.

Argentina made a traverse from Belgrano Station to the Pole; three Argentine planes flew to the Pole by way of Belgrano Station. Dobrowolski was visited by air from Mirnyy to check the condition of the buildings on behalf of the Polish Academy of Sciences. The Soviets made short scientific journeys inland from Mirnyy and Molodezhnaya.

In 1966 ten years of continous scientific co-

operation in Antarctica were celebrated by the naming of 'Antarctic Day.' Each country involved chose a suitable day for celebration.

1966-1967

On March 30, 1967, the Netherlands became the sixteenth nation to accede to the Antarctic Treaty. In addition to the twelve which had signed the treaty in 1959, three others had acceded: Poland (1961), Czechoslovakia (1962), and Denmark (1965). In February 1967 the United States exercised its rights under the treaty to examine activities and facilities at stations operated by Argentina, Australia, France, Japan, South Africa, the United Kingdom, and the Soviet Union. As expected, the observers found no violation of the treaty. Exchange visits of scientists continued between the stations of several nations.

The U.S. started its Marie Byrd Land survey this year. A multidisciplinary exploration of the coastal area from Cape Colbeck on Edward VII Peninsula to Grant Island off Hobbs Coast was carried out by eighteen scientists and engineers, supported by a military aviation detachment. Geological studies were conducted in almost all mountains of the area. Botanists studied algae, lichens, and mosses. Paleomagnetic investigations compared rocks of Jurassic

age from this region with rocks of the same age from other regions to evolve the tectonic history of the continent. Aeromagnetic surveys were combined with surface measurements of gravity, magnetism, and ice thickness.

At Byrd Station the U.S. installed a deep-drilling rig and drilled to a depth of 216 m. Most of the ice core was retrieved for study. It was planned to extend the drilling to bedrock in 1967-1968. Extensive aerial photography of mountain regions in West Antarctica was carried out by the U.S. as part of a continuing program. The photographs obtained provided coverage for mapping an area of approximately 800,000 km², twice the coverage of any previous season.

A Soviet traverse party journeyed from Molodezhnaya to the Pole of Inaccessibility and thence to Plateau Station and Novolazarevskaya, a distance of 3200 km. Gravity observations and measurements of ice thickness were made.

In February 1967 Belgium closed its station, Roi Baudouin, which had been established in December 1957.

An American Alpine Club mountaineering group successfully climbed sixteen of the highest peaks in Antarctica, including the highest, Vinson Massif (5140 m). A New York travel agency sponsored two tourist cruises to the Antarctic Peninsula aboard an Argentine naval ship. Ninety-four tourists participated.