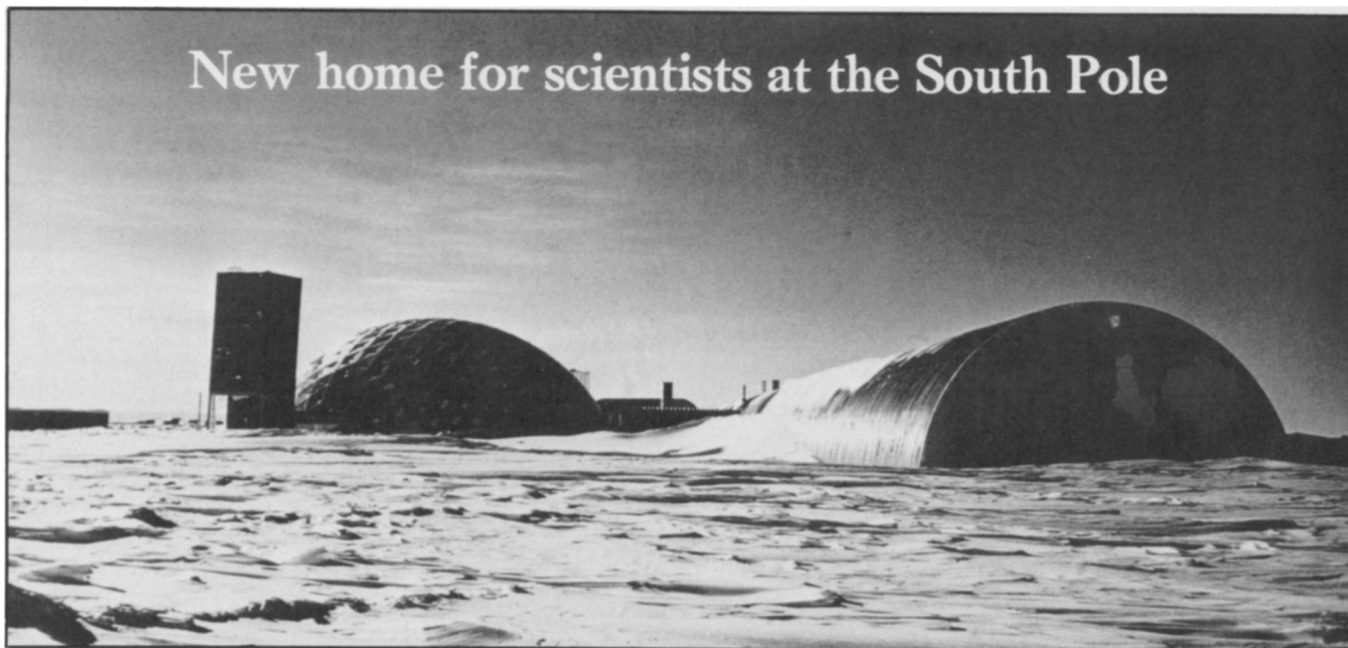


New home for scientists at the South Pole



A flight south from McMurdo Station, Antarctica, takes one across an almost unimaginable panorama: down the length of the majestic Transantarctic Mountains, across the giant Beardmore glacier, and then out over the flat featureless 9,000-foot-thick ice cap. Three hours fifteen minutes and 840 miles after departure, the ski-equipped C-130 glides to a stop at the bottom of the world.

This is the South Pole, and after four years of construction in perpetually sub-zero weather the United States has now completed its new scientific station, replacing the old one built in 1956 and now being slowly crushed under 40 feet of accumulated ice and snow. The new base, like the old, is named the Amundsen-Scott South Pole Station. It was activated Jan. 9 in ceremonies at the South Pole conducted by a 24-member official group including National Science Foundation Director H. Guyford Stever, National Science Board President Norman Hackerman, Rep. J. J. Pickle (D-Tex.) of the House Science and Astronautics Committee and representatives of the Antarctic Treaty nations.

Stever read a letter from President Ford calling the event a rededication to the ideals of the Antarctic Treaty. "By making our South Pole facility accessible to scientists of all nations, we reaffirm our devotion to the ideals of cooperation that are characteristic of Antarctica. . . ."

The new station is dominated by a five-story-high geodesic dome which protects three buildings inside from the weather and the weight of blowing snow. The three interior structures, each two-stories high, contain the living quarters for the scientists and technicians (35 in the summer, 18 this coming winter), work space, dining hall, library,

store, communications, post office and photo lab. An 800-foot-long series of corrugated steel arch structures outside the dome houses the power plant, fuel, vehicles, biomedical laboratories and other support facilities. A 52-foot tower near the dome is for auroral studies.

The station was built slightly "upstream" from the actual geographic South Pole. The flow of the ice cap, 9 to 10 meters a year, will carry the station over the pole in several years.

Research at the station is part of

the U.S. Antarctic Research Program, funded by NSF. Navy Seabees built the station for NSF, and it will be maintained and operated by a private company. Of the four U.S. stations in Antarctica, all but one, McMurdo, are now operated by civilians. □

SN Editor Kendrick Frazier reported further details about the new South Pole station when he visited there during construction in December 1973 (SN: 1/19/74, p. 43).

Soyuz 17—Salyut 4: A promising start

Less than five weeks after the Soyuz 16 cosmonauts returned to earth from their checkout flight for the upcoming Soviet-American space rendezvous, Aleksei Gubarev and Georgi Grechko took off aboard Soyuz 17 and docked with the waiting Salyut 4 space station.

Aboard the three-room, 20-ton station they began a program described as including a variety of biological, medical and earth-resources studies, with no indication from Soviet officials of how long they would stay in space. Launched on Dec. 26, the station was followed on Jan. 11 by the cosmonauts, who docked with it a day later.

Soyuz 17's primary contribution, in fact, may well turn out to be one of the few successful Salyut docking missions. Three cosmonauts docked with the first Salyut in 1971 but did not get inside. The next one was successfully occupied for 24 days, but the crew died as their Soyuz sprang a leak during descent through the atmosphere. A third station, called Salyut 2 (the first was experimental and apparently thus unnumbered), is believed to have suffered some sort of accident in orbit, and it returned to earth without a crew

even having been sent aloft to occupy it. The one fully successful Soyuz-Salyut mission was that of Soyuz 14 last July, but that was followed by last August's Soyuz 15 flight in which the crew was unsuccessful even at docking with the station in the first place.

According to veteran cosmonaut Georgi Beregovoi, now a leading Soviet space official, the Soyuz 17 mission is "in no way connected with additional check-ups of Soyuz systems before the rendezvous with Apollo spacecraft," now scheduled for July. The Soyuz 16 flight, however, carried a variety of equipment being evaluated for the two-nation project such as the receiving collar that will help couple the two spacecraft together (the Soyuz will be the "passive partner" during the approach maneuvers). Other rendezvous gear tested by Soyuz 16 included an optical docking target, a homing transmitter, a modified electrical system and a newly installed window to be used in a solar occultation test in which the Apollo spacecraft will line itself up between the Soyuz and the sun to create an artificial eclipse while the cosmonauts photograph the solar corona. □