

ON the seventieth degree of the inhospitable southern latitudes of the Antarctic circle and 2,370 sea miles from Cape Town is the South African research station SANAE. Every year a little red ship, the R.S.A., specially built for its purpose, sets its course from Table Bay to the permanent research centre in the ice. The supply ship usually carries fifteen or sixteen dedicated scientists specially chosen for their self-discipline and their ability to endure hardship. They go to replace the team which during the previous twelve or thirteen months has made its contribution towards the world's knowledge of this great land about which so much still has to be learnt.

For a full year their home is thirty feet under the frozen surface

of the northern point of Antarctica. The base has a series of wooden rooms and sleeping quarters which are built on the surface where the wooden walls seem thin protection against the hurricane winds that sweep over everything. The never-ending snow storms have, however, buried it altogether and the entrance to the base now is a vertical shaft in the packed snow.

At first the men shiver in the -15°C cold, but they soon become acclimatised so that eventually at -25°C they are able to work outside without discomfort, provided the wind does not blow and the sky is unclouded. During a wind and snow-storm no one ventures outside except the men whose duties demand that they plod through wind and snow along the guide rope to the

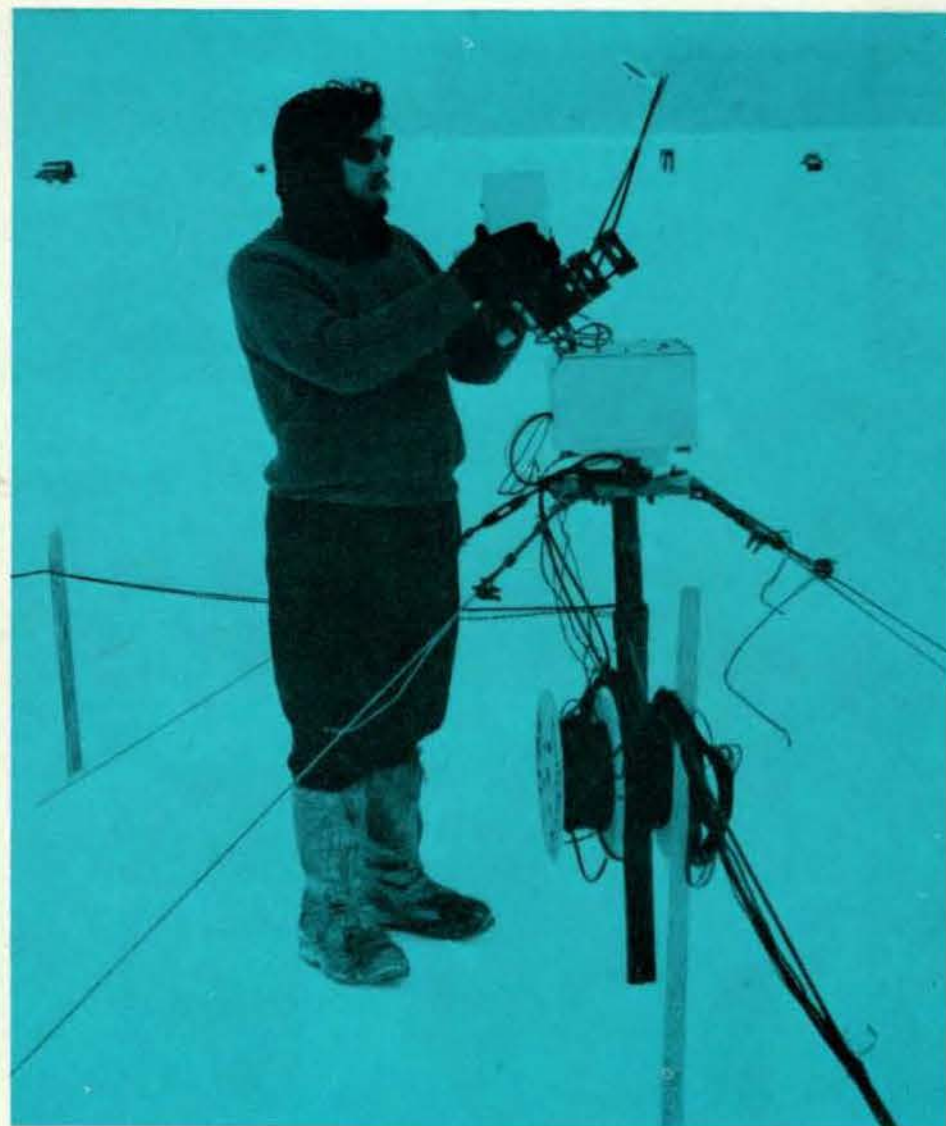


Right: The completed buildings with some of the left-over materials.



Left: Provisions being off-loaded after the arrival of the ship.

Below: Mr van Wyk adjusting the heliostat.

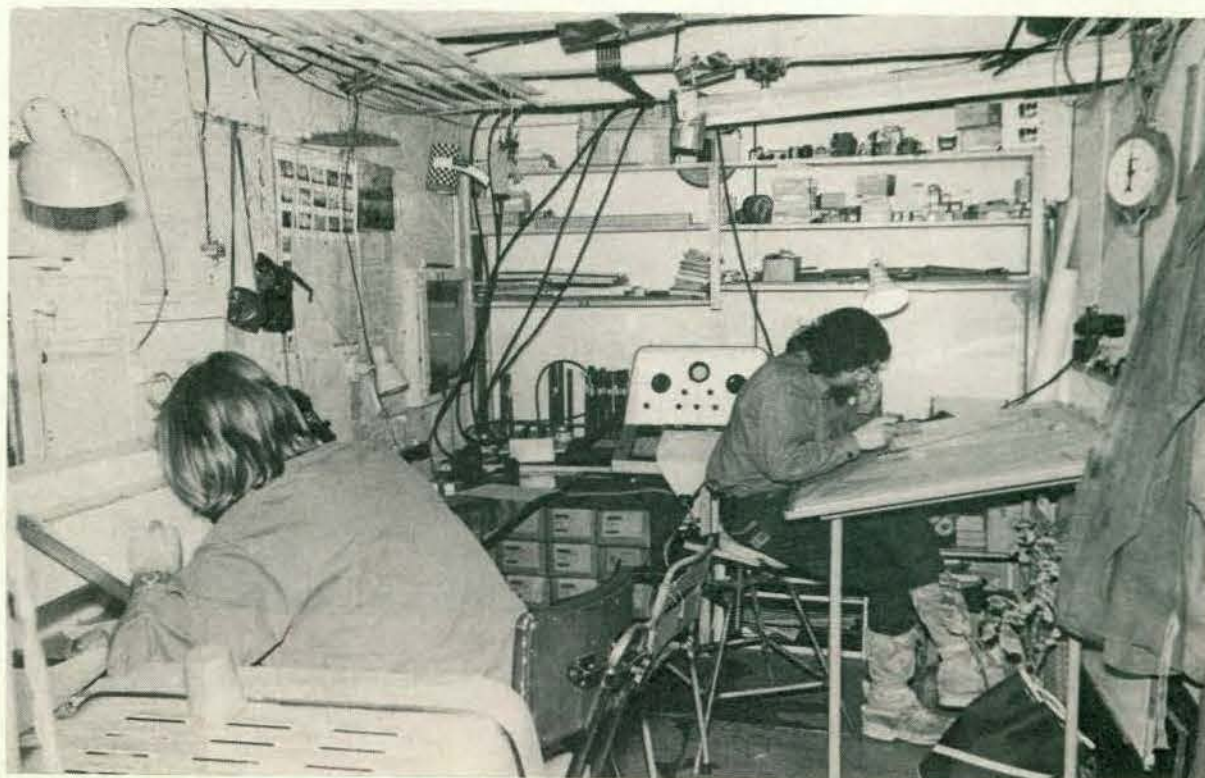


SOUTHWARD TO THE ICE

Photographs by Die Beeld and Department of Transport.

geomagnetic hut to change the records.

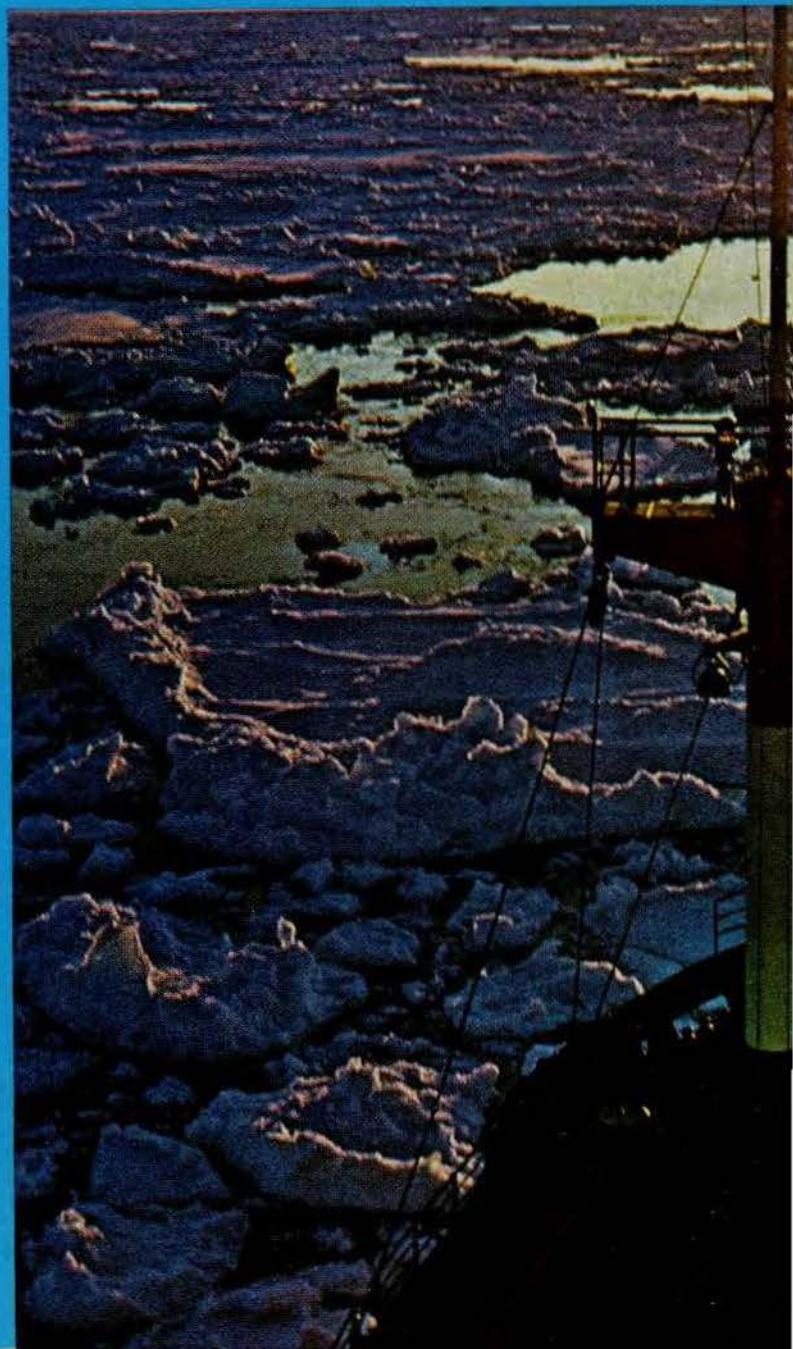
The greatest single scientific research programme at SANAE is undoubtedly the weather programme which is organised and carried out by the S.A. Weather Bureau of the Department of Transport. South African meteorologists have long recognised the influence of the Antarctic and sub-Antarctic regions on weather conditions in South Africa and over the entire Southern Hemisphere. In 1948 they established the first weather research station on Marion Island. The first South African to make the acquaintance of the Antarctic continent was Hannes la Grange who had been a member of Sir Vivian Fuchs's Trans-Antarctic Expedition in 1957. Since December 1959 the South African weather



Two members of the expedition at work in the weather office.

TO THE ICE

Right: Every year the 'RSA' — South Africa's 1,550-ton polar supply ship—takes a relief team to the Republic's base in Queen Maud Land, Antarctica.



Fresh supplies and implements are loaded into the hold of the ship. SANAE stands for South African National Antarctic Expedition.

observations have been co-ordinated with those of many other countries for analysis and study.

The other research programmes in Antarctica are financed by a special fund granted for that purpose by the State and administered by the Department of Transport. The programme itself is co-ordinated by the C.S.I.R. Scientific Committee for Antarctic Research, and is undertaken by South African universities and other interests, with organisational help from the Department of Transport.

This programme can be divided into three main categories. First, the programme for upper air physics, which is concerned mainly with the study of the southern anomaly. Secondly, the geographic programme concerned with the study of the



Above: Ice-bound! The RSA can cope with this kind of situation.

Left: The tough little 'RSA' ploughs her way through a fairy-land of ice.



Above: The South African scientific team SANAE VII which returned to South Africa after nearly fourteen months at the base.



Antarctic continent itself, and thirdly, the detailed biological study of the two islands, Marion Island and Prince Edward Island.

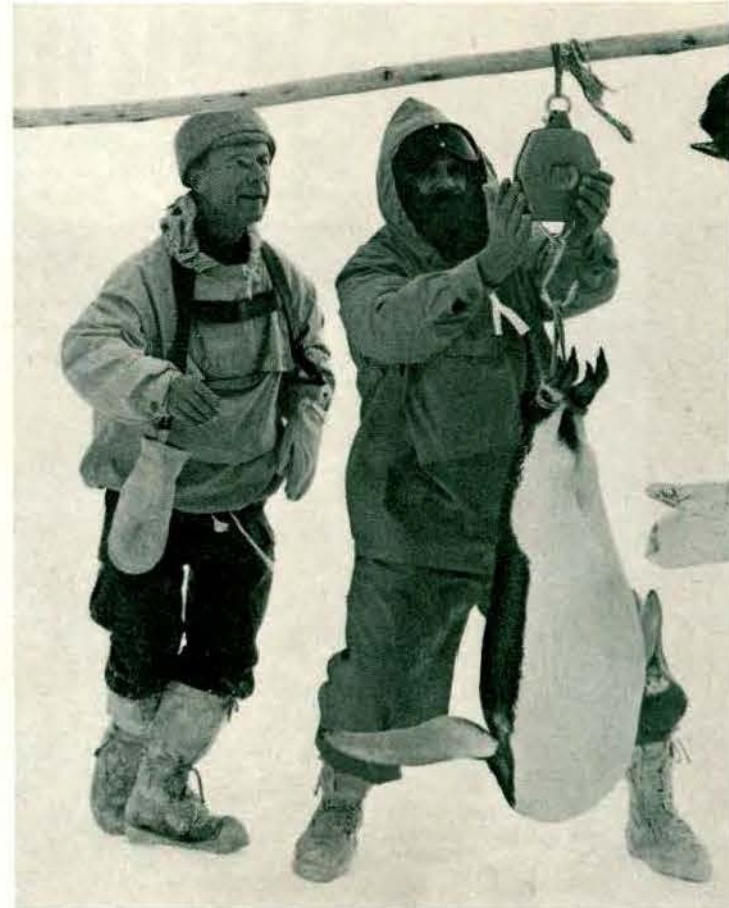
The programme for upper air physics covers, among other things, research in the ionosphere, cosmic rays, incandescent air, aurora and geomagnetism. These programmes all aim to give a better understanding of the phenomena associated with the so-called Southern Magnetic Anomaly, south-west of the Cape. According to satellite and other observations SANAE is apparently near the centre of the anomaly—that is an area in which the horizontal intensity of the earth's magnetic field is much lower than would be expected from its geographic position—and is therefore especially suitable for such research.

The geographical research programme is also extensive. Apart from the basic geological charting a considerable part of the manifold



SOUTHWARD TO THE ICE

Left and below: A variety of jobs from handling stores to weighing penguins!



Left: Taking a walk in the Antarctic on a Sunday afternoon.

Below: Dogs received from the Belgian team being carried on board during the trip to Antarctica.



Above: A crevice creates a problem in the Antarctic.

researches carried out by this active programme is covered by seismology, field geophysics, oceanography and glaciological cartographical projects.

Although every year the storm winds bury SANAE deeper in the snow the scientists on this outpost of scientific research are steadily and systematically busy unveiling the mysteries so long hidden by the great ice continent and the surrounding islands. Antarctica is the only continent whose natural resources are unknown, and until the land has been fully explored geologically and geophysically no one can be sure what economic possibilities it contains.

The next R.S.A. expedition will leave Cape Town on December 29, 1967. The team will consist of 16 members, one of whom will make a special study of recreation and leisure time. This year's leader is Mr D. G. Joubert, who previously visited the Antarctic in 1965/66. ***