

Focus on astronomy

by John Gribbin and Ian Ridpath

A RECENT flurry of activity related to observational astronomy has emphasised that the obituaries for British optical astronomy may have been written too soon. Certainly the prospects for optical astronomy in Britain are dim; but the stirrings of the supposed corpse are having repercussions around the world, emphasising the international nature of modern astronomy.

Anglo-Australian Telescope: The AAT is the furthest of these projects from Britain geographically, but perhaps the most important in scientific terms. In spite of the usual difficulties of marking out territory on international projects (which will be familiar to readers of Fred and Geoffrey Hoyle's book *The Inferno* (Heinemann, 1973)) the project is still more or less on schedule. The official timetable, which sees commissioning of the telescope in October with completion of alignment and testing of optics and instrumentation in December of this year, looks a trifle optimistic. But it does seem that the facility will be ready for use early in 1975.

Infrared telescope for Hawaii: The SRC recently announced the decision to go ahead with construction of a 3.8 m (152-inch) infrared flux collector on Mauna Kea in Hawaii. This ends long speculation about the future of British infrared astronomy, and will result in the world's biggest 'purpose built' infrared telescope being located at a site which is recognised by astronomers as one of the best in the world. The SRC will lease the site for the instrument from the University of Hawaii, which already operates an observatory on Mauna Kea, at a height of 4,200 m.

This project has suffered more than most from political intervention, with sites such as Tenerife being ruled out because of poor relations between the British and Spanish governments. But for once the astronomers may have come out well from the politicking, since it seems likely that the Hawaii site would have been felt too remote for administrative convenience if an alternative closer to home had remained viable. The site is also convenient from a practical point of view, because it is far enough south to provide a good view of the galactic centre, a region of great interest to infrared astronomers. The construction costs for this telescope are estimated as £1.25 million at January 1974 prices, and construction is expected to take three years.

Mr Gordon Carpenter, the project manager, said last week that tenders

are now out and are expected back in early October. The site allocated is on the same mountain ridge as the University of Hawaii 88-inch optical telescope, and so most of the access roads and so on are already there. It should be possible to pour the first concrete in 1975, he said.

All this must make hot favourite as the location for the Northern Hemisphere Observatory, about which a decision is thought to be imminent.

South Africa: Amidst all this lightening of the astronomical gloom which has been so prevalent in recent years, a few storm clouds remain as a reminder that astronomers have not entirely abandoned their centuries-old tradition of internecine squabbling.

Since the opening of the new South



Hartebeesthoek tracking station

African Astronomical Observatory, with its observing station at Sutherland in the Karoo and its headquarters at the Cape Observatory, the former Republic Observatory in Johannesburg has been effectively abandoned. The observatory's buildings in Gill Street stand silent and empty, with the 26½-inch refractor, responsible for the observatory's world-renowned work on double stars and classic colour photography of Mars, now under mothballs in its dome.

Only one astronomer remains at the observatory, examining plates taken for minor planets with the 10-inch Franklin Adams telescope at Hartebeestpoort, 50 miles outside Johannesburg.

The decision to cannibalise the Republic Observatory and concentrate efforts at the Sutherland was received with mixed feelings by astronomers a few years ago, and Dr William Finsen, formerly Director of what was once South Africa's national observatory, was among the critics who spoke out against what he saw as a wrong decision by the SRC and the South African

Council for Scientific and Industrial Research (see *Nature*, 229, 355; 1974). Today, Finsen is in retirement and virtually an outcast from the South African astronomical establishment. For good or bad, however, the reorganisation of observational astronomy in South Africa is now essentially complete, and under the forceful direction of the former Astronomer Royal Sir Richard Woolley, it is hardly likely to become a backwater.

South African radio astronomers, meanwhile, like their infrared colleagues in Britain, seem to have benefited from a partially politically oriented decision. The 26-m (85-foot) radio dish of the former NASA deep-space tracking station at Hartebeesthoek, near Pretoria, ceased operation at the end of June this year, officially as part of "an overall consolidation activity" to prune the NASA tracking network. Privately, however, astronomers say that pressure from black politicians in the United States is believed to have influenced the decision. The associated tracking station for Earth-orbiting satellites is to close next year.

The deep-space station, opened in 1960, has been used to track all NASA's unmanned probes to the Moon and planets; it has now been taken over by South Africa's Council for Scientific and Industrial Research, and is being modified to work as a radio astronomy observatory. Initially the aerial will work at a wavelength of 13 cm, and eventually wavelengths as short as 4 cm will be available. The South African radio astronomers hope to have the telescope operational by the end of the year, and perhaps as soon as September. Surprisingly, however, no firm programme has yet been decided; but the interest of the observatory's director, George Nicholson, in quasars and extragalactic work is certain to make itself felt.

Leaving aside this somewhat fortuitous windfall to the radio astronomers, the revival of British and associated optical astronomy can in retrospect be traced back over several years. Certainly five years ago there was cause for concern; but with hindsight it is becoming clear that the problems have been recognised and to a large extent tackled. Projects such as the Schmidt at Siding Spring, the AAT and the new infrared telescope are now becoming physical realities, and allowing for the inevitable delay in the filtering of the resulting benefits through the system, the patient may not only be able to take up his bed and walk but may even be running around in the first team in another ten years or so.