

ards in all parts of the world), 1,400–1,427 MHz (which includes the hydrogen line at 21 cm and which URSI would like to see extended towards lower frequencies so as to make possible observation of Doppler-shifted lines, but where international reservation of the frequency seems to be impracticable), 1,660–1,670 MHz (where the draft would like to see improved protection for observations of the OH line) and at a number of frequencies in the GHz range where URSI would like to see improved protection.

How many of these matters will be implicitly decided before the ITU conference is at present in doubt, but there seems to be no shortage of potential problems. By then, the allocation of frequencies may be less immediate a question than the allocation of parking spaces for geostationary telecommunications satellites.

CARBON FIBRES

Morgan Changes Course

WHATEVER the outcome of the takeover bid by Morgan Crucible for Fothergill and Harvey, the Lancashire company specializing in composite materials, it is clear that Morgan Crucible has committed itself to a new policy on carbon fibres. The shutting down of the research laboratory at Northfield near Wandsworth marks the end of Morgan Crucible's effort in fundamental research in carbon fibres and signals its new interest in going full scale into the development and production of composite materials.

This train of events is not altogether surprising. Dr J. Saunders, head of Morganite Research, pointed out last week that the research laboratories have produced more basic knowledge than can be absorbed on the production side. The real profit from carbon fibres lies in the manufacture of composites, he said, and Morgan Crucible is now engaged in finding the best commercial arrangement to carry this out. The strands of fibre are essentially useless until they are incorporated in a matrix material, which can be a resin, a plastic or a metal.

Morgan Crucible has an exchange agreement with Whittaker Corporation in the United States for a feedback of information on fibre techniques, and it is hoping that, by taking over the going concern of Fothergill and Harvey, it will be better placed to produce composite materials in the immediate future. Dr Saunders has emphasized that the glass fibre techniques used by Fothergill and Harvey cannot be switched overnight to the production of carbon fibre composites, but that the transformation would be far simpler than starting up a plant from scratch.

The chances of the takeover going ahead are not very great, however. The initial response of Fothergill and Harvey to the offer has been cool. It may prefer to build up closer ties with one of the American companies with which it has been associated.

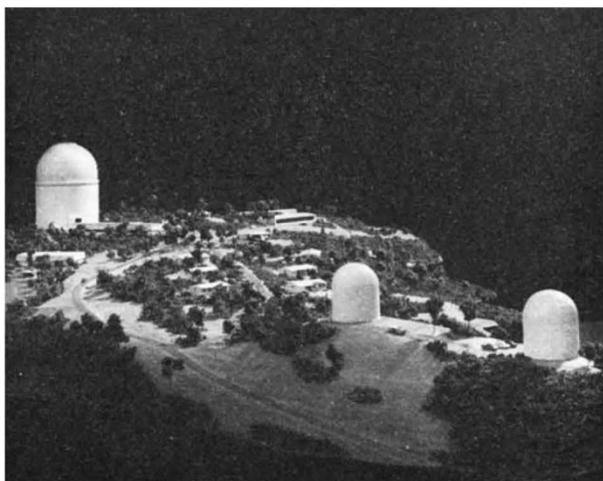
ASTRONOMY

Planning for Southern Skies

from our Astronomy Correspondent

EVERYONE knows of the rich pickings for astronomers in the understudied skies of the southern hemisphere,

and the British Science Research Council is now in the throes of seeing how best to exploit its facilities within a limited budget. Pride of place will of course go to the 150-inch reflector being built 350 miles north of Canberra as a joint effort with the Australian Government, but the burning question is what other telescopes the SRC will be able to afford. According to the Director of the Astronomy, Space and Radio Division of the SRC, Mr J. F. Hosie, rumours that the council is to cut down its operations in South Africa so as to concentrate on the Australian observatory are ill-founded. The key document in the council's deliberations is the Southern Hemisphere Review, so far unpublished, which was compiled last year by a committee of three under the chairmanship of Professor Fred Hoyle. Its members were Professor R. O. Redman (Cambridge), Dr R. Wilson (SRC Astrophysics Research Unit, Culham) and Mr Hosie. Limited to optical astronomy, the review was ready at the beginning of the year and, as well as spelling out the scientific case



Model of the observatory on Siding Spring Mountain. Dome at the left contains the Anglo-Australian 150-inch; centre dome is for the proposed British instrument; and the dome on the right marks a telescope which is being allowed for in the plans and could be added at a later date.

for astronomy south of the equator, it made specific recommendations which are at present under consideration by the Astronomy, Space and Radio Board of the SRC.

One of the recommendations is likely to be that a purely British telescope should be set up alongside the 150-inch Anglo-Australian instrument at the Siding Spring site. Justification for this comes out of experience at Pretoria, where the permanent staff were called on to give a great deal of assistance to visiting astronomers. The SRC feels that it would be public-spirited to have a permanent British staff on hand at the observatory, and that a telescope ought to be provided to keep them happy when not working on the 150-inch. Another reason is that some of the work British astronomers will want to do can almost certainly be carried out on a smaller instrument. Just now the question is what instrument would be most valuable. The Australian National University already has telescopes of 60-inch, 40-inch and 24-inch aperture, and the SRC is eager to choose something which would