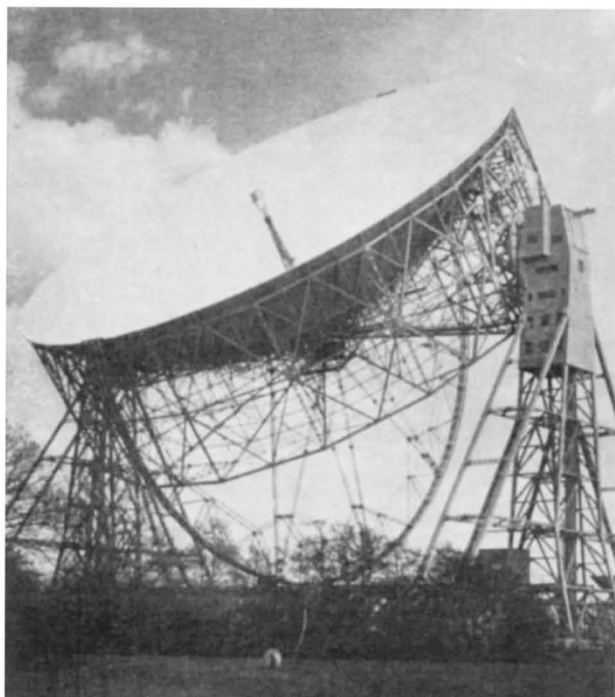


the supports which carry the weight of the 800 ton bowl to the two towers.

None the less, the telescope will not be entirely idle during its forty-two week recuperation period. During that time the bowl will be in the rest position pointing vertically upwards at the zenith, and a sequence of observations is planned of two pulsars which transit close to the zenith, CP 0328 and HP 1507. Observatories do not normally have the time to follow the day-to-day variations in the intensity of pulsar signals, but this is what Jodrell Bank proposes to do, like a bed-ridden patient catching up on his reading. The observations should fill a notable gap in the literature.



The Mark I telescope at Jodrell Bank—forty-two idle weeks will result in an instrument able to operate at shorter wavelengths.

When the normal observing programme stops for the engineering work to begin, probably at the end of July, the first step is the strengthening of the telescope to carry the extra weight of the new lining of the bowl. At present the weight of the bowl is supported only by the towers on each side, but in the Mark Ia some of the load will be carried to a point midway between the two towers through a girder the present purpose of which is to stiffen the bowl. This is the bicycle-wheel girder which will have to be widened and which will in future be used to help steer the telescope in elevation. At present, steering in elevation is carried out through the towers. The strengthened bicycle wheel will also reduce the changes in shape of the bowl which occur as the elevation is altered. A new inner railway track to carry the load from the bicycle wheel has already been laid down. When the strengthening of the structure is completed, probably in October, the fitting of the new lining can begin.

The conversion to the Mark Ia is being carried out with a Science Research Council grant of £545,000, and once again Husband and Company are the consulting engineers.

## ASTRONOMY

### Lowering Sights in the Infrared

by our Astronomy Correspondent

THE scheme to upgrade the 60-inch infrared telescope being built by Professor J. Ring's group at Imperial College, London, into a fully-equipped instrument has now been passed by the Astronomy Policy and Grants Committee of the Science Research Council. In this way an infrared telescope that is able to do valuable astronomy from a site with good seeing conditions could be available to British astronomers by next summer, a year or two earlier than expected. This is to be achieved by raising the cost of the telescope from £27,000 to something like £50,000, in order to convert what was to be principally a transportable site-testing instrument into a permanent telescope with a proper drive and a permanent shelter. But going over the £50,000 ceiling means, of course, that the project has yet to be approved by the council of the SRC.

The original plan drawn up in 1968 was for a cheap and portable 60-inch telescope which would have been used to test the locations being considered as sites for the proposed infrared observatory and to study the seeing conditions, in particular the amount of water vapour in the atmosphere. But it now seems that the choice has narrowed to two possibilities, Tenerife in the Canary Islands and the Sierra Nevada mountains of southern Spain, with Tenerife almost certain to emerge the winner during the next few weeks for reasons of convenience as much as anything.

Another reason for the haste is the way infrared astronomy has been progressing during the past year or so, and astronomers in Britain are eager to get started. Already fascinating results to do with the energetics of galactic nuclei and with the composition of interstellar dust have emerged from the United States, where most of the effort in infrared astronomy is concentrated. But the United States still has no telescopes larger than 60 inches devoted entirely to infrared astronomy.

In 1968 the plan was for the 60-inch telescope now under construction to pave the way for the development of a 120-inch infrared telescope, but it now looks as if the justification for the 120-inch is being questioned. Infrared astronomers in Britain and the United States are coming round to the view that infrared telescopes with apertures of 60 to 80 inches give the best value for money. Thus the committee on infrared astronomy which is chaired by Professor Ring is having to reconsider the 120-inch project, another reason for turning the 60-inch flux collector into something that will be immediately valuable to astronomy. But there could still be a case for building the 120-inch telescope for operations in the near infrared, and long wavelengths of about a millimetre. It is at the fashionable wavelengths of ten microns or so that the advantage of the large instrument is small, if it exists at all.

## FAMILY PLANNING

### Respectability at Last

WHEN the Duke of Edinburgh opened the Margaret Pyke Centre for Study and Training in Family Planning last November, the seal of respectability was well and