

Running telescopes

Managing British astronomy is up for talks. Here is a recipe for the committee responsible.

THE first tangible product of the review of the pattern of British academically related research to which the Science and Engineering Research Council committed itself six months ago is hardly the revolution some had feared (or, sometimes, hoped for), but is none the less interesting on that account. The nub of the decision about research in astronomy announced last week is for the time being unremarkable, even hackneyed: there is to be another committee, the composition of which will be decided only next week. But in the course of inviting comments, the council says its objective is to decide what arrangements there should be for managing the two modern observatories in which the British have a majority share, at La Palma and in Hawaii. (The Netherlands, Spain, Denmark and Sweden are differently involved in one or other or even both of the projects.) By putting the question in those terms, the council has side-stepped what in the past has seemed the central question in British astronomy, that of whether the two observatories (at Herstmonceux and Edinburgh) should be merged and, if so, on which site. To ask instead the question how the new observatories should ideally be managed should provide a more constructive agenda for discussion than the many earlier enquiries on related subjects.

As things are, the Royal Greenwich Observatory (at Herstmonceux) is responsible for the La Palma observatory, to which it has donated its largest telescope, the 92-inch Isaac Newton reflector. Edinburgh, on the other hand, has had operational responsibility for the Anglo-Australian telescope, roughly 18,000 kilometres distant. (Nothing is said in last week's announcement of the importance of that instrument in the future scheme of things, confirming earlier guesses that the research council plans to trade its share of the capital equipment for a measure of observing time.) But yet another laboratory, the Rutherford Appleton Laboratory in the middle of southern England, has an important place in the management of British astronomy, both in the operations of the computer network by which data are exchanged between university laboratories and in supervision of the millimetre-wave telescope being built on Mauna Kea. On the face of things, British astronomers are over-well catered for in these respects. What the new committee should be asking is whether they should now be given a chance to look after themselves.

There is now plenty of recent experience to suggest how this should be arranged. Like other kinds of laboratories, observatories need directors, preferably persons of distinction in the field concerned, astronomy in this case. Even when the chief users are from universities, observatories also need to have a resident scientific and technical staff. Given the geography of the new British ventures, these will presumably be chosen to be as small as possible. For the rest, there need to be oversight committees, essentially trustees, and committees for the allocation of observing time, which again need not always meet in the shadow of the instruments they service. To give this pattern of management conviction with the users, some way should be found of incorporating users or their representatives in these managerial functions. These are the essential ingredients of the management structure, which happen not to involve the existing observatories at Herstmonceux and Edinburgh.

But this, of course, is not the whole of the fabric of support for a lively astronomy enterprise. The development of instruments has been shown in recent years to have been crucial to the improvement of techniques, at both telescopes, while the management and storage of data is likely to become just as important in the years ahead. But the people best placed to know what instruments will yield worthwhile results are potential users and their frequent attendants, the people with a zeal (and flair) for making things a little more sensitive or accurate, from which it follows that the research council should make grants to university astronomers for the development of instruments (which

already happens), keeping up its sleeve some means for building what the enthusiasts design (best done, alongside the development of instruments for satellites, at the Rutherford Appleton Laboratory). Data management needs to be done by astronomers, not toilers in some huge laboratory, which argues for transferring this responsibility to one of the two observatories in the United Kingdom. With its recent success in designing data handling techniques, Edinburgh seems a better bet than Herstmonceux.

This is the kind of pattern to which logic leads — a single smaller observatory based in Britain, more responsibility (as for instrument design) given to the university users of the new equipment and central support in engineering from a large laboratory. So why bother with a committee? Because committees are about politics as well as reason. The choice of which observatory to close is bound to be invidious, and so is most easily made by people with an appearance of detachment. That is how the argument goes. So the research council ultimately in charge should simplify the committee's work by making clear in advance how it would deal with the people, possibly counted in hundreds, whose jobs would vanish under a brisk plan for reorganization. And the council should do its level best to practise what it has been preaching in the past few years, that astronomy is not only an end in itself but also a way of acquiring skills of general applicability, by shouldering the task of finding acceptable and useful jobs for those who may be displaced. At a time when Britain, against the recent trends, is about to be better blessed with facilities for observation in astronomy, it would be absurd that the dole queues should be lengthened by an influx of professionals in the field.

Beware junk bonds

Business in the United States, always inventive, seems bent on turning fiction into truth.

THE board-game "Monopoly" was designed in Atlantic City to mimic the real world of property speculation. Now, the financial wizards of Wall Street and similar places seem bent on adapting "Monopoly" to real life. Shadowy figures with colourful names such as T. Boone Pickens have hit on a novel way of buying up desirable companies in the stock market. The stratagem is ingenious and simple. A publicly-quoted company is singled out as a target, often on the strength of its diversity and the likelihood that its business assets are undervalued. Then a second corporation is created which offers to buy a proportion of the stock in the target in return for securities of its own, usually in the form of interest-bearing certificates. To make the deal attractive to the shareholders, the rate of interest is fixed at a level great enough to promise a return greater than the dividends earned from the target company. To lend reality to the offer, the company usually has to spend cash buying a proportion of the outstanding stock in the markets. Under United States law, it will suffice for the raider's purpose to acquire just that proportion of stock to gain control of the target company.

That is phase one. The problem now is that the shell company that has won control of its target is saddled with a load of debt, which can only be discharged by selling off the assets of what was originally the target company, exchanging the cash proceeds for the outstanding debt. In principle, these schemes will work so long as the assets can be sold for more than the nominal cost of buying half the target company. In practice it is often more profitable to offer some cash with the original purchase, for then the purchase price may be much lower. One way and another, the junk bonds outstanding from the recent frenzy of takeovers in the United States continue to be serviced. So far as anybody can tell, none of the schemes financed by junk bonds has yet come unstuck. But the amounts of money involved are so large (\$9,000 million for Gulf Oil) and the basis of these deals so shadowy, that some of them are bound at some stage to run into trouble, perhaps because the assets are no longer as saleable as they seemed. Then a lot of people who thought themselves rich will find themselves poor, the common experience after the Great Crash of the 1930s from which "Monopoly" sprang. □