

ASTRONOMY

Hoyle Stays Home

SIR FRED HOYLE will, after all, remain in Britain. In spite of rumours to the contrary following his decision to resign the Plumian chair of Astronomy and Experimental Philosophy at Cambridge, he will, in early 1973, take up an honorary research professorship in physics and astronomy at the University of Manchester.

The news, which leaked out after a meeting of the senate at Manchester last week, has delighted the astronomy community in Britain and Sir Bernard Lovell in particular. Sir Bernard said earlier this week that even though he was instrumental in persuading Sir Fred to come to Manchester, negotiations Hoyle had announced were started only after his resignation from the Cambridge post.

The University of Manchester has yet to ratify the appointment, which will come up before the council of the university on July 19, but Sir Bernard says that there will "be no problems" and no difficulty in finding the money necessary for Sir Fred to carry on his work. A part of the arrangement is that Sir Fred will spend part of each year in Pasadena, as he has done for the past several years.

What will, perhaps, be as much of a blow to astronomy at Cambridge as Sir Fred's departure is the news that Manchester is going to institute a summer visitor scheme similar to that operated so successfully at the Institute of Theoretical Astronomy during Sir Fred Hoyle's directorship. Sir Bernard Lovell said on Monday that they would go forward with plans to attract eminent scientists to Manchester for short periods and that there would be "no difficulty with money" for this project.

Professor J. C. Willmott, director of the physics laboratories and professor of nuclear physics at the University of Manchester, said on Monday that Sir Fred would divide his time between the astronomy and physics departments. Sir Fred has a great interest in the problems of cosmology which can be experimentally investigated in a nuclear structure laboratory, and Professor Willmott said that his presence will be an impetus to the study of the subject at Manchester. At present, there is no active research in experimental nuclear astrophysics in progress in the department but the facilities, notably a 6 MeV van de Graaff accelerator with associated electronics, are available. Professor Willmott said that he had no immediate plans to restart work in this field but that Sir Fred's presence would be a catalyst for such work and that it was certainly possible that a group would be set up once Sir Fred was installed.

NOISE

No New Scale

UNSATISFACTORY though it is, the noise and number index (NNI) for assessing the nuisance caused by low flying aircraft is unlikely to be revised in the near future. After more than a year of deliberation, the research sub-committee of the Noise Advisory Council has decided that in the absence of anything better the index should remain.

The index was created in 1961 following a survey at Heathrow Airport, London, commissioned by the Wilson Committee on the Problem of Noise. The index is based on the average peak noise level at the ground and the number of flights overhead. The index has been used by the Wilson Committee to calibrate a nuisance scale with the terms "slight", "moderate" and "high".

Convenient though the NNI has been, there have always been doubts about its validity and usefulness. The Wilson committee was well aware of these problems, the chief one being that the basis for determining levels of nuisance is entirely statistical. The results for night time annoyance were inconclusive, and the data on which the index rests come only from Heathrow, so its value at other airports is questionable. The index has nevertheless been widely used in Britain—for example to determine the zoning of building near Gatwick and the siting of London's third airport.

A second, more extensive, survey was commissioned at Heathrow in 1967 to check the 1961 findings, and certain important differences emerged, the consultants recommending that the NNI scale be recalculated and the degrees of nuisance be recalibrated. The Noise Advisory Council decided to examine these recommendations soon after it was set up in 1970.

The chief differences between the two surveys were that in 1967, people seemed less sensitive to the same level of noise as in 1961 and that people were more sensitive to the worst noise level they experienced, rather than the average level, which is the basis of the NNI, and that the level of nuisance drops at night.

But the Noise Advisory Council's subcommittee, after examining these differences, argues that there should be no change, and it is understood that the Department of Trade and Industry will accept the committee's point of view.

In defence of its attitude, the subcommittee says that it is not against change, believing that improvements should be brought in as soon as they are proven, but it fears "that the results of excessive haste would be detrimental to the public interest".

No change therefore should be made

in either the day or night time formulation of NNI. What, then, should be done? Re-examine the 1967 statistical evidence is the subcommittee's answer, and try and settle the doubts it has raised.

INSTITUTE OF PHYSICS

Coming Out of the Woods

AFTER a £35,000 deficit last year, the members of the Institute of Physics have agreed to increases of up to 40 per cent in membership fees. At the institute's annual general meeting on July 4 the necessary 75 per cent majority agreed to the increases which should bring the institute a further £28,000 in income in 1973.

But if the increase in membership fees sees the institute out of the wood for the time being, it is not yet in clover. The deficit last year was the worst ever, and although the increase in membership fees will help, balancing the books next year will be no mean feat. Membership fees make up only some 15 per cent of the institute's total income, with publications providing the lion's share. Last year these fared about as well as in 1970, but expansion with an eye to future profit meant that less money was available for use elsewhere in the institute. Dr L. Cohen, secretary of the institute, said this week that "the last two years have been very tough, and there is little sign of a let up in the next year or two".

The officials of the institute itself saw the problems coming some time ago, but the membership was less far sighted. In 1971, two attempts to raise subscriptions, first by 50 per cent and then by 25 per cent, both failed to get the necessary 75 per cent majority, and the institute's staff was very relieved to see the increases go through this time.

For the future, the institute hopes to see its publications prosper and it hopes to cut its costs to keep on an even keel, but with inflation continually chipping away at the value of its fixed income, it seems only a matter of time before further measures will be necessary.

SOVIET SCIENCE

COMECON Meeting

from our Soviet Correspondent

THE meeting of the COMECON council in Moscow, which opened last Monday, represents a new stage in the technological and scientific integration of the Eastern European bloc.

So far, this integration has taken the form of specific projects; *Druzhba* oil pipeline, the Interkosmos series of