

NEWS AND VIEWS

Agreement at Last

THE Southern Hemisphere telescope will be built after all. The discussions recently reported in *Nature* (214, 336; 1967) between the Australian and British Governments have ended with the decision to go ahead with the telescope, which will be built and operated jointly by the two governments. The announcement ends several years of vigorous lobbying by astronomers in Britain, Australia and the United States since the idea was first put forward five years ago. In June 1965, the Royal Society and the Australian Academy of Sciences delivered to their governments a joint petition, but it has taken almost two years for a decision to be reached.

The telescope will be a 150 in. instrument, and will be built at Siding Spring Mountain near Coonabarabran in New South Wales, where the Australian National University already has an observatory. It is expected that the cost of the telescope will be about £4.4 million, if it is based on the design for the Kitt Peak telescope being constructed in the United States. It will be the largest telescope in the Southern Hemisphere, and will take about six years to build; a joint policy committee is to be set up to draw up the final specification, call for tenders, and supervise the construction of the telescope.

The only surprising feature of the announcement is that it has finally been made—the need for the telescope is undisputed. Big telescopes are needed in the Southern Hemisphere for observations of features of the sky invisible to northern astronomers—the Magellanic Clouds and the centre of the Milky Way, among others—but interest has been quickened by the excellence of the radio astronomy in Australia. Under clear Australian skies, radio astronomers may be able to identify radio sources which they have found but which cannot yet be related to visible objects in the sky. Now the decision has been made, their frustrations can be channelled more fruitfully into ensuring that the new telescope is as good as it promises to be and that it is quickly built.

Booming Industry

ANY last lingering hopes by British Aircraft Corporation and Sud Aviation that their Concord would be the only supersonic transport competing for orders in western airlines—or by others that they might yet be spared the whole supersonic race—have now been dispelled. President Johnson has given approval for Boeing to build two prototypes of their swing-wing aircraft which won the design competition four months ago, and will ask Congress for \$198 million as the Administration's share in the cost of the prototype. Boeing have so far been proceeding on a monthly basis, but claim that this has not delayed their programme—the first prototype is due to fly by the end of 1970, and the airliner should be in service by the end of 1974. Concord will take off for the first time on February 28, 1968, if all goes well, and will be in service in 1971.

Despite the lead established by Concord, and the fact that it will cost far less than the Boeing aircraft (£6 million against about £14 million), the airlines have shown their faith in the Boeing company by taking out 113 options for the Boeing, against Concord's total of 72. This shows an almost child-like belief in Boeing's ability to solve the very substantial technical difficulties inherent in their design, which it is now suggested may fly at 2,000 m.p.h. Concord, limited by its aluminium construction to a speed of 1,450 m.p.h., is an altogether less sophisticated aeroplane, but nevertheless is reported to have met with doubts about its fuel supply. This involves the actual transfer of fuel in flight from one tank to another to trim the aircraft, a system which will have to be absolutely foolproof in order to satisfy the Federal Aviation Agency. As for the Russian TU 144, it remains the darkest horse in the race, with a programme broadly in line with that of Concord.

Nuclear Mismanagement

A BLANKET condemnation of British nuclear power policies has been published this week by the Institute of Economic Affairs. *The Political Economy of Nuclear Energy*, by Duncan Burn (I.E.A., 21s.), concludes that between them the Atomic Energy Authority and the Central Electricity Generating Board have mismanaged the exploitation of nuclear power in Britain on a truly heroic scale. According to Mr. Burn, the initial decision to concentrate on gas cooled reactors—which he hints was based on the belief that they are inherently safer—was a mistake which has been papered over by a succession of chairmen of the C.E.G.B. and the U.K.A.E.A. This attempt to conceal mistakes, he believes, reached its peak in 1965, when the appraisal of the tenders for the Dungeness B contract was published by the C.E.G.B. The result of this joint assessment by the A.E.A. and the C.E.G.B. was that the advanced gas cooled reactor could produce electricity more cheaply than the American designed boiling water reactor (0.457 d/kWh, against 0.489 d/kWh). Hailed at the time as a major breakthrough for British power reactors, Mr. Burn suggests that the appraisal was a farce which misrepresented the costs both of the B.W.R. and the A.G.R.

Although the building costs of the B.W.R. were significantly less than those for the A.G.R., they should, Mr. Burn suggests, have been even less; they were at least 50 per cent higher than the B.W.R. plant being built at Oyster Creek in the United States by General Electric, and 80 per cent higher if the upper estimate for the output of the Oyster Creek reactor were accepted. In the U.S. it is common for contractors to quote two power outputs—one guaranteed, and another higher and more speculative. If the upper figure is accepted, the price per kilowatt of the station tumbles, but the system requires the power company to accept some of the contractor's risk, an arrangement constitutionally unacceptable to the C.E.G.B.

Mr. Burn also admits that the Oyster Creek contract was a special case. G.E., he says, quoted for the station on the assumption that it would be able to sell six such stations. In Britain, on the other hand, the C.E.G.B. had said in 1964 that it envisaged ordering only one station per year, which could hardly have encouraged competitive pricing. These differ-