

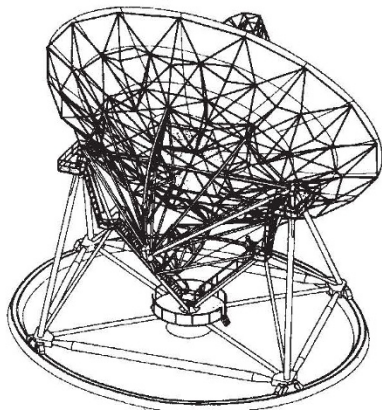
US astronomy

Arrays in, dishes out

Washington

The US radioastronomy community, after much agonizing, has decided to give first priority to the construction of the Very Long Baseline Array (VLBA) radio telescope — a decision that effectively means that the 25 metre telescope — which it has sought for several years without obtaining funds — will not now be built.

Associated Universities Inc., the management group that runs most major US radioastronomy facilities, recently submitted a formal proposal to the government asking for \$51 million in 1982



The 25-m millimetre wavelength telescope

dollars to build the network, which would extend from Alaska to Hawaii and across the continental United States to New England.

Using interferometric techniques, VLBA will have a baseline on the order of the radius of the Earth, and so will be able to achieve extraordinary resolutions of 0.3 milliarcsecond. Thus it will be able to study many aspects of the so-called "violent universe", such as explosive events in quasars and in the nuclei of galaxies. It may also permit precise distance determinations to maser sources in our own galactic system."

The 25-metre telescope, on the other hand, would have used very short, millimetre wavelengths to investigate interstellar molecular chemistry. It was first recommended in 1972 by a committee of the National Academy of Sciences (NAS) headed by Jesse L. Greenstein of the California Institute of Technology. The National Radio Astronomy Observatory in Charlottesville, Virginia, has sought funds for the 25-metre telescope since 1977; in some of those years, the National Science Foundation forwarded the request to the White House, where, for unrelated budgetary reasons, it stopped. Meanwhile, related work has continued at smaller dishes at Caltech, the University of California at Berkeley, Bell Laboratories and the University of Massachusetts.

Other countries, too, entered the promising field: the United Kingdom has a 15-metre dish at Mauna Kea, in Hawaii,

while the Franco-German telescope institute IRAM (Institut de la Radioastronomie Millimétrique), based at Grenoble in France, plan two telescopes — one almost ready at Pico Veleta in the Sierra Nevada near Granada in Spain, the other under construction at the Plateau de Bure in the southern French Alps (near Grenoble). The Japanese, too, plan to build one, and a copy of the dish destined for Granada has even been ordered by the government of Iraq.

But in spite of its once-widespread support in the United States, "time has passed the 25-metre by", as one astronomer said last week. The most recent review of astronomical priorities, a report by another NAS committee headed by Harvard astronomer George Field (see *Nature* 8 April, p.482), included a sub-committee to set priorities in radio astronomy hardware, headed by Pat Thaddeus of Columbia University's Institute for Space Studies. At that time, the 25-metre telescope seemed likely to be funded, so the final Field report gave top priority to the need for VLBA. Only afterwards, was it clear that even in fiscal year 1983, the 25-metre telescope would not be funded. So its virtual omission from the Field report meant it was doomed.

US radioastronomers hold mixed views about this gap in the field, in which the United States was a pioneer.

On the other hand, nobody disputes that VLBA, if it is built, will be a major advance, as nothing like it is planned elsewhere in the world.

Deborah Shapley

Fields Medal awards

Two Americans and a Frenchman are the 1982 winners of the Fields Medal, the "Nobel Prize" of mathematics, it was announced in Warsaw on Sunday.

The International Congress of Mathematicians (ICM), meeting this year in Poland, awarded the medal to William Thurston of Princeton University, S. T. Yau of the Princeton Institute of Advanced Studies, and Alain Connes, who is at present a director of research at the headquarters of the Centre National de la Recherche Scientifique in Paris. As a mathematician, Connes is attached to the Ecole Normale Supérieure and the University of Paris VI.

The Fields Medal, an inspiration of an early president of ICM, is awarded every four years. These are the ninth and tenth awards for Americans, and the sixth for a Frenchman — a remarkable record for France, bearing in mind that the United States has four times the population of France.

Robert Walgate

British academic pay

Five per cent

Last Wednesday a council meeting of the Association of University Teachers (AUT) approved a 5 per cent pay increase for university lecturers. It had little choice. When talks between AUT and the Universities Authorities Panel (the body nominated by the Committee of Vice-Chancellors and Principals to negotiate salaries) reached an impasse, the matter went to arbitration and 5 per cent was recommended. The award, which has been approved by Sir Keith Joseph, Secretary of State for Education, means that the universities will be faced with yet another book-balancing feat. The outcome may be further job losses.

Negotiations between AUT and the vice-chancellors were mainly over how much the universities could afford to set aside for salaries. Initially the vice-chancellors said they could afford nothing. The body both sides most wanted to negotiate with was the government. Each made representations to the government for more money to meet a pay increase. But the government remained adamant that any award must be met from the grants given to the universities by the University Grants Committee. The government did decide, however, to provide £770,000 to meet two-thirds of the cost of the 6 per cent award made to clinical academics to maintain their parity with National Health Service workers. "That is in some way understandable", commented Mr Laurie Sapper, general secretary of AUT, "After all, most government ministers are over 50 and don't want to upset the medics".

AUT was hoping for a much higher award to keep in line with other public sector settlements and to compensate for inflation. The vice-chancellors were in agreement with AUT that it was unfair for members of university staff to have their pay further depressed in relation to other employees in public institutions. But they insisted that an award over 4 per cent, the amount allowed for in the government-set cash limits, could not be met without outside help.

Dr Albert Sloman, chairman of the Committee of Vice-Chancellors, pressed the case for more money in a meeting with Sir Keith Joseph on 25 June. In a further letter on 23 July, after the settlement of the award, Dr Sloman pointed out that the rising salary costs would mean a further running down of the university system. In his written reply Sir Keith Joseph made it clear that additional money would not be forthcoming.

Given the universities' stringent cash limits, the negotiations between AUT and the vice-chancellors left little room for manoeuvre. In giving a 5 per cent award the government's attitude seems to be, if the unions want more money, they know it may mean fewer staff.

Jane Wynne