

THE success of the Ariel-5 satellite has produced an unfortunate outburst of parochialism in some sections of the British press, with comments such as "Britain leads the world in X-ray astronomy" and "most discoveries are British" recurring among reports of the latest discovery. This may be true at the present moment, since the US Uhuru satellite is no longer effective, plans for a European X-ray astronomy satellite have yet to be finalised and clearly the UK national press finds the Netherlands too small to notice. But the reaction is a particularly unfortunate one in view of the great importance of international cooperation in X-ray astronomy, and the great success of that cooperation so far.

Data from the pioneering Uhuru satellite, for example, were made widely available outside the circle of US experimenters directly concerned with its design and operation; the widely publicised Copernicus satellite combines both US ultraviolet telescopes and UK X-ray detectors: and indeed Ariel-5 itself carries a US experiment, and was, come to that, launched by a US rocket. The series of letters beginning on page 628 of this issue gives some idea of the extent of international cooperation in this sophisticated area of research; an even better indication is provided by the four letters on pages 107-112 of this volume, in which groups from three countries using observations from four

satellites and from the ground combine to describe a change in the X-ray and radio emission from the source Cygnus X-1.

Of course there is an air of friendly rivalry between the different groups, especially in the urge to publish observations of an exciting new discovery first; but everyone involved in X-ray

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astronomy is well aware of the need to make the best use of the limited funds available. This will not be achieved if we move towards a situation where the rivalry becomes real and deep, with data being hugged close to the chests of the discoverers while they indulge in mutual claims that "my satellite is better than yours". It is to be hoped that the discoverers of exciting new phenomena in space will in future, when they announce how remarkably clever they have been to find anything at all, encourage the listening reporters to present a balanced view of the remarkably successful international collaboration behind the whole story. To many people, it is more significant to learn that scientists from different parochial groups can work together in effective harmony than to learn that something has been discovered and that no one quite knows what it is, but at

least it was a British discovery.

● Minor Planet Circular 3827 of the International Astronomical Union announces the names accorded to a number of Minor Planets discovered by Dr L. Kohoutek with the 80-cm Schmidt Camera of the Hamburg Observatory, Bergedorf. A singularly appropriate one is MP 1896, named Beer, in honour of Dr Arthur Beer, formerly of the Cambridge Observatories, who recently celebrated his 75th birthday. The citation refers particularly to his 20 year editorship of the series *Vistas in Astronomy*, first produced in 1955 in honour of Professor F. J. M. Stratton, but continued as a serial publication that is highly regarded by astronomers for the wide ranging nature of its articles, essays and reviews. Dr Beer joins the small number of astronomers in England with a planet named after them in their lifetime—others were Stratton, and Dr G. Merton of Oxford.

The same Circular names planets 1897-1899 after J. R. Hind, the English astronomer who discovered 10 minor planets in the middle of last century, and after P. H. Cowell and A. C. Crommelin, distinguished in this century for their contributions to computational methods in minor planet and comet theory. Together they investigated the orbit of Halley's comet and identified its apparitions back to 239 BC.

UNDER a new agreement between the United States and Israel a water desalination project likely to cost \$55 million has just been started. A test module is to be built at the Mediterranean port of Ashdod, about 40 km south of Tel-Aviv, to be followed by a prototype plant with a desalting capacity of 10 million gallons a day, linked with the local Eshkol power plant. America's contribution will amount to \$20 million.

American interest in Israeli desalination has a long history. Section 219 of the Foreign Aid Bill approved by Congress in 1969 provided for the joint participation of the U.S. government and the State of Israel in the development of a large desalination plant, including the construction of a prototype for such a plant and its test operation. For this the sum of \$20 million dollars was allotted by Congress.

In February 1971 the Israeli National Council for Research and Development (NCRD) presented to the US, on behalf of the Israeli government a detailed draft of a proposed Multi-Effect Distillation process (MED), developed by Israel Desalination Engineering Ltd (IDE), and backed by NCRD since 1970 as

Israel and US in water deal

from Kapai Pines, Jerusalem

probably the best desalination system in the world.

In November 1972 a memorandum of understanding was signed between both governments to construct an MED prototype plant at Ashdod, and on May 13 this year the US Secretary of the Treasury and the Israeli Minister of Finance signed a joint statement in Washington while meeting at a US-Israel Joint Committee for Investment and Trade. They said that the proposed joint water desalination project had undergone a lengthy period of evaluation, and they agreed that it was now feasible to proceed with the arrangements for the design, construction and initial operation of a large-scale prototype plant and to negotiate a technical agreement subject to the necessary consultations with Congress. Subsequently, a US technical mission came to Israel, and on May 21 a joint agreement was negotiated between the two countries to carry out the project.

A small MED pilot-plant inaugu-

rated near Eilat in June last year, produces about 1 million gallons of potable water per day. This water is integrated into the regular water supply system of Eilat, and the technology of this plant forms the basis for the proposed large-scale plant in which the Americans are interested. The new distillation process is said to cut the cost of desalted water from 60 American cents per 1,000 gallons in other distilling processes to less than 24 cents. One of the distinguishing advantages of the IDE process is that it can efficiently employ low-pressure, low-temperature steam, while other distillation processes require higher temperatures for efficient operation. Furthermore, the overall process is characterised by maximum energy recovery and minimal waste.

Another distinguishing feature resulting in economic advantage involves the use of aluminium tubing rather than copper in the fabrication of heat exchangers. The use of the aluminium is made possible by the relatively low temperature of the process, and also results in a substantial savings, since heat exchangers comprise a major cost-element in plant construction. □