

OLD WORLD

Launchers for Europe ?

THE question of whether United States rockets will be used to launch European communications satellites was carried right into the American camp last week. Professor Maurice Levy, chairman of the council of the European Space Research Organization, took the opportunity of an address to the American Astronautical Society in Washington to demand a guarantee from the Americans that their launchers will be available for European communications satellites as well as for scientific and other applications satellites. Otherwise, he said, Europe will have to envisage continuing her own launching activities.

The United States has already given general assurances that any country's scientific and applications satellites will be launched provided that they are for peaceful purposes and that the obligations of the United States under international arrangements and agreements, such as Intelsat, are honoured. But the offer of launchers for communication satellites is hedged about with conditions that make it anything but an open assurance.

So far, all Europe's scientific satellites have been launched by the United States. But when Europe's first communications satellite becomes due for launch in 1979 or 1980, commercial considerations will come to the fore for the first time. What Europe wants is a plain statement from the United States that all its satellites will be launched, regardless of commercial interests.

"The Europeans," Professor Levy said, "will endeavour to avoid duplication and waste in the space field. . . . If Europe can obtain a real guarantee that American launchers will be supplied for all European satellites developed for peaceful purposes, then the community of European countries may consider giving up their own launcher programmes. . . . Only real guarantees on the granting of licences for the construction of launchers, and more generally on the availability of American launchers, could lead Europe to reconsider her position".

The problem, for ESRO, is one of some urgency. Three applications satellites were approved by the organization's council in 1971, and the launch date for the first of these is only three years away. The chances of the European Launcher Development Organization having the French-designed L3S ready for operation by then must, on past showings, be remote. The rocket is still largely on the drawing board even though it uses some existing com-

ponents, and ELDO is about to go through a time-consuming reorganization as it becomes part of the proposed European Space Agency which is to come into existence on January 1 next year.

With two of ESRO's three applications satellites there should be no problem. AEROSAT, part of an international air traffic control programme, is in any case a shared programme with the Americans, so a launcher for that in 1976 is no problem. Similarly ESRO's meteorological satellite, part of the World Weather Watch programme and also due for launch in 1976, presents no commercial threat to the United States.

But ESRO's European Communications Satellite (ECS), a test version of which is to be flown in 1976 and full versions of which are planned for 1979 or 1980, is another matter. Designed for intra-European communication the satellite will handle telephone, telegram,

telex and television channels and must be considered viable.

Professor Levy emphasised in his speech recently that one of the most important objectives of Europe's space programme for the 1980s is to meet user requirements. This involved, he predicted, not only communications satellites but also relay satellites served by numerous small terminals designed to meet the specific requirements of users such as newspapers and banks.

But before ESRO has to have launchers for its communications satellites, the French and Germans need one to launch their communication systems *Symphonie I* and *II*. At present these are to be launched on *Europa II*, but the programme may well be scrapped before their launch date (see *Nature*, **241**, 359; 1973), in which case an American (or Russian) launcher will be the only way to fly the satellite, and the indications are that the Americans will launch it.

CONTRACT RESEARCH

Fulmer-Yarsley Merger

THE Fulmer Research Institute, owned by the Institute of Physics, is to merge with Yarsley Research Laboratories (YRL) to form a company with a turnover of £750,000 a year. Fulmer confidently expects this figure to rise to £1 million a year in 1975.

Fulmer and Yarsley are no strangers to each other, for each company has in the past done sub-contracting work for the other. But after May 1, 1973, the links will be much closer and will allow the new company to offer customers a wide range of expertise. In the past, Fulmer has been noted for its work on surface coating and alloy development among other things whereas YRL has been strong on polymers and plastics.

YRL at present operates at Chessington, Surrey, where there is little room for expansion and, through its subsidiary Yarsley Technical Services (YTL) at Ashstead, Surrey. The plan is that the activities at Ashstead will continue as before, although the shares in YTL will be held by Fulmer, but that work at Chessington will be transferred to the new Yarsley laboratories at the Fulmer site in Stoke Poges by the end of September.

The new combined concern will employ 200 staff of whom 85 are professionally qualified. In 1971 Fulmer had a turnover of £467,000 and made a profit of £15,000 after paying £12,500 to

Turnover of British Independent Contract Research Organizations (1970)

	£ thousand
Huntingdon Research Centre	2,000
International Research and Development	1,100
Robertson Research International	740
Ricardo and Co.	740
Fulmer + Yarsley	590
Inveresk Research International	250

the Institute of Physics. The profit for 1970 was much higher—£25,500—but in that year the Institute of Physics received only £9,100 (see *Nature*, **232**, 4; 1971). Also Fulmer spent £12,000, a particularly large amount, on taking out patents in 1971. YRL, on the other hand, had a turnover of £220,000 in 1971-2 and made a modest profit of £4,000.

How will the new Fulmer Research Institute compare with other contract research organizations in Britain? The Table shows the situation in 1970. Evidently Fulmer will be within striking distance of the four largest companies when the merger is complete. Overall, contract research in Britain is now worth about £12 million a year, which includes more than £3 million from contract research activities at Harwell. This is still much less than the amount spent in the United States on contract research; there the total market is more than £250 million a year and the largest companies, the Battelle Institute and Stanford Research, each have an annual turnover of about £50 million.