OLD WORLD

Post-Apollo Participation Still in Doubt

THE next episode in the sorry saga of Europe's involvement in space is being played out in Paris this week. An informal two-day meeting of ministers responsible for aerospace is being held, at which such perennial hardies as Europe's involvement in the post-Apollo programme and the future of ELDO, the European Launcher Development Organization, are doubtless being mulled over once again.

How far this "informal" meeting is likely to produce any hard decisions is unclear. On past performances little is to be expected. But the meeting may clear the air sufficiently to allow the European Space Conference (whose past two meetings have been postponed at the last minute) to convene some time this year and finally reply to the Americans' invitation to join the post-Apollo programme. The Americans have been very patient. The original deadline for cooperation was July this year, but when July came and went with Europe still vacillating, the deadline was obligingly moved to the end of last month, although the details of what the Americans are offering as possible cooperative projects appear to have changed.

The end of October having passed, with the European Space Conference achieving nothing other than the cancellation of its meeting scheduled for October 26, it appears that the offer is still open, although the Americans seem noticeably less keen to extract a decision from Europe now that the shuttle bill has safely passed the guns of Congress. (International involvement, so the argument ran, would make Congress less likely to cut the programme than if it was simply an all-American venture.)

But if Europe decides to go in now, the benefits could be many times smaller than if a decision had been made soon after the offer was put up two years ago. Originally the extent of European involvement was undefined and the Europeans could have had a sizable say in writing their own ticket, but as time has gone by NASA has tied down the areas in which Europe can play a part more and more tightly; and each time the decision is postponed the area of possible involvement becomes smaller. Now that the October deadline has passed, Europe's proposals for involvement, if they ever come, will have to fit NASA's plans.

But what are the chances of Europe deciding to join America in orbit? Better, it appears, than they were, but still far from good. The Germans—who with France are the mainstay of ELDO—seem to be moving round to the British view that it is better to buy American launchers that work than build European ones that do not. (ELDO's eleven launches in ten years have so far failed to put anything into orbit.) Following a visit to Washington in September by Herr Klaus von Dohnanyi, the West German Minister for Science, the Germans seem much keener than they were on taking an active part in the post-Apollo programme, and Herr von Dohnanyi stated

on German television last Sunday that the Europa programme was a false investment which should be abandoned in favour of a slice of post-Apollo.

But France remains adamant that American assurances that launch facilities will be available are not firm enough, and insists that Europe should develop her own independent launch facilities. It has even been suggested that if the worst came to the worst and ELDO dropped Europa III, then France would consider going it alone. And the situation is not made any easier by the imminence of a general election in Germany which could stand Bonn's space policy on its head again.

So the prospects of European agree-

FRENCH SCIENCE

Closing the Purse Strings

from *La Recherche*

FINANCE for the French five year plan for scientific research has been heavily curtailed. The 1973 budget of 3,710 million francs, just announced, represents an increase of a mere 4.6 per cent over the 1972 budget in a year when inflation has run at about 6 per cent. Under the five year plan, the budget should in fact have risen by 7.5 per cent at constant prices.

The new figures have come as a disappointment to many. Following the tight years of 1970 and 1971, the start of the sixth five year plan last year (see *Nature*, 233, 514; 1971) at least raised hopes for a brighter future.

But while the 1973 budget reflects no overall growth, the situation is less serious in some sectors of research than others. Basic research has been relatively well treated. The Centre National de la Recherche Scientifique (CNRS) will receive Fr.296 million for equipment in 1973—its 1972 budget was only Fr.252 million—although the grants available for university research remain virtually unaltered in 1973. Medical research also does well, the equipment budget for the Institut National de la Santé et de la Recherche Médicale rising from Fr.35 million to Fr.45.7 million. Thus it appears that the policy makers, and in particular the civil servants in the Délégation Générale à la Recherche Scientifique et Technique (DGRST), have managed to protect the long-term interests of basic research, even though the budget is a tight one.

But the *grands programmes* of high technology are falling further and further behind. The budget of the Commissariat à l'Energie Atomique (CEA) will hardly rise at all, nor will that of the Centre National d'Etudes Spatiales (SNES), and both still have their problems.

CEA wants to reorientate much of its work to non-nuclear activities, although plans to do this are still embryonic, while CNES is suffering from the problems of the past and the uncertainty of the future with European space policy still in its perennial shambles. France has yet to convince her European partners that the Europa III launcher should be built, but the implications for CNES could be considerable, especially if France decides to embark on the project alone as some senior civil servants wish.

But if life is hard in the fields of high technology, it is even tougher in the industrial world. The *l'aide au développement* programme which was started several years ago to buttress industrial research comes to a halt in the 1973 budget—even though industrial research is one of the areas recommended for emphasis in the sixth five year plan. Finance for the programme is to be cut in 1973 from Fr.210 million last year to Fr.154 million. But with a fine sense of waywardness, the government has decided to put Fr.85 million into the electronic industry. In deciding to support this sector, which time and again has received state subsidies, the government is turning its back on one of the more important objectives of the sixth five year plan—that of stimulating industrial research in such areas as chemistry, mechanics and metallurgy.