

commitments during the period with no launches, is said to total more than \$250 million. It has also been a frustrating time for Europe's space scientists and engineers; for example, the next scientific payload, the European Space Agency's star-observing satellite HIPPARCOS, is not now due to be launched until the middle of 1988, more than a year later than previously planned.

However, last year's aborted launch, the fourth failure in 18 flights, does not seem to have had a major impact on Ariane's commercial prospects. Arianespace officials announced last week that they currently have signed contracts for 44 future satellite launches worth a total of \$2.35 billion. In February 1986, there were advance orders for only 29 satellites worth less than half this figure. Reservations have been made for a further 24 launches.

Furthermore, the most significant growth has been in non-European customers. This is a reflection both of the intense worldwide sales campaign that has been conducted by Arianespace (which now has its own offices in Washington, D.C., and Tokyo) and of the delays to the U.S. space shuttle launch schedule.

Thus, Arianespace can now boast that more than half its future launches will be for non-European enterprises and organizations. The total number of firm contracts signed with U.S. companies, for example, has risen from 8 to 14, and other contracts have been agreed with organizations in Japan, India and, most recently, Canada.

The August launch is scheduled to put into orbit two television and telecommunications satellites. Two further launches are currently planned before the end of the year—originally it was hoped to have seven in 1987—with eight in 1988 and nine in both 1989 and 1990. One of the earliest will be the first launch in January of a new version of the European launcher, Ariane IV, which will be able to place into transfer orbit a payload up to 4200 kilograms, compared to the maximum of 2000 kilograms that can be carried by the current version.

Both psychologically and politically, however, the August launch will be by far the most important. Not only will Arianespace's growing list of future customers need a clear demonstration that the technology can be trusted, but the launch will take place shortly before a crucial meeting of European research ministers called to agree on the detailed contents of their joint space program over the next 10 years, a program in which France is determined that its plans for a much larger version of Ariane, Ariane V, should play a central role. ■

DAVID DICKSON

Bavaria Requires AIDS Testing

The West German state of Bavaria last week introduced stringent regulations covering individuals infected with the virus widely regarded as the cause of Acquired Immune Deficiency Syndrome (AIDS). These rules include the compulsory screening of all those applying for public sector jobs, similar screening of non-Europeans seeking residency permits, and the forced isolation of those carrying antibodies to the AIDS virus who refuse to follow specified preventive procedures, such as a ban on breast-feeding.

The Bavarian action has been taken despite a joint decision the previous week by the health ministers of the 12 member countries of the European Economic Community (EEC) to reject demands for rigid controls on potential AIDS sufferers, such as systematic border checks and the mass screening of specified social groups.

Several individual countries have already established their own controls. For example, the West German Interior Ministry has in-

structed its border guards to turn away any non-European believed to be suffering from AIDS or infected by the virus.

The Bavarian government, which is controlled by the right-wing Christian Socialist party, had already gone further than most by introducing compulsory AIDS tests for all prostitutes, prisoners, and drug addicts. In announcing the new measures, the state's health minister said he hoped that they would be followed by similar steps elsewhere in Germany.

The health ministers of the 12 EEC countries, meeting in Brussels on 15 May, issued a joint statement expressing "their hostility toward any system which clogs up the circulation of individuals and toward any discrimination which does not have a clear scientific foundation." Border controls and mass screening, said the ministers, were both "inefficient" forms of prevention.

Germany's federal minister for health, Rita Süßmuth, was among those who signed the statement, and she has taken a strong stand in favor of preserving the anonymity of AIDS victims. However, under Germany's constitution, responsibility for health policy is left in the hands of individual states. ■ DAVID DICKSON

Prosecution Urged In Fraud Case

The National Institute of Mental Health (NIMH) has concluded that one of its former grantees, Stephen E. Breuning, "knowingly, willfully, and repeatedly engaged in misleading and deceptive practices in reporting results of research," and "that he did not carry out the described research." The finding is the result of a protracted investigation stemming from concerns about the authenticity of Breuning's work, first conveyed to NIMH in December 1983 by Robert Sprague of the University of Illinois at Urbana-Champaign, a former colleague of Breuning's (*Science*, 19 December 1986, p. 1488).

Donald Macdonald, head of the Alcohol, Drug Abuse, and Mental Health Administration, NIMH's parent agency, has referred the case to the Justice Department with a recommendation that prosecution of Breuning be considered. No previous case of alleged scientific fraud is known to have resulted in criminal prosecution. In addition, Macdonald has recommended that Breuning be barred from receiving grants or contracts from the Department of Health and Human Services for 10 years.

Breuning, 34, who is currently an assistant director at the Polk Center in Pennsylvania's Department of Public Welfare, is the author of several influential studies on the

use of psychoactive drugs with institutionalized mentally retarded patients. He supposedly conducted research at two institutions in Michigan in the late 1970s and was at the University of Pittsburgh School of Medicine from January 1981 to April 1984.

A panel established by NIMH under the chairmanship of Arnold J. Friedhoff of New York University notes that Breuning's work "made a strong impression on the mental retardation field with a small number of publications in which he described well-designed studies that produced relatively robust and straightforward findings," and that his studies have affected treatment of the mentally retarded in several states.

The Friedhoff panel concluded, however, that many of the studies Breuning reported were in fact never carried out. "Only a few of the experimental subjects described in publications and progress reports were ever studied," the panel said.

In a lengthy response to a draft of the Friedhoff report, Breuning maintains that he did not engage in fraudulent practices and accuses the panel itself of using "threat and intimidation." The panel says it "found no reason to change the substance of its report or its conclusions," on the basis of Breuning's comments. ■ COLIN NORMAN