

US Air Force to overhaul its antisatellite weapons programme

Washington

THE Pentagon has reasserted its interest in moving ahead with antisatellite weapons (ASAT) testing by announcing a significant restructuring of its existing ASAT programme. But Congress has prohibited ASAT testing until 1 October this year, and opponents of the ASAT programme moved quickly to introduce legislation that would extend the testing ban.

The last US ASAT test took place on 13 September 1985, when a two-stage rocket tipped with a miniature homing vehicle launched from an F-15 aircraft successfully intercepted an unused satellite in polar orbit. In December 1985, the Air Force launched two instrumented test vehicles (ITVs), intending to use them as targets for additional ASAT tests. But that same month, Congress passed for the first time the Brown-Coughlin amendment prohibiting tests of ASATs for one year so long as the Soviet Union refrained from testing. Congress extended Brown-Coughlin for a second year in October 1986.

The restructuring of ASAT would involve three steps. One would be to test three F-15-launched systems against ITVs during the next fiscal year, with the first test planned for the end of 1987. A second step would be to investigate a more powerful first stage for ASAT launched by the F-15 so that targets in higher orbit could be attacked. At the same time, the Air Force will investigate a ground-launched system using modified Pershing II missiles. A final step would involve development in conjunction with the Strategic Defense Initiative (SDI) of a ground-based high-power laser. For 1988 the Department of Defense (DoD) is seeking

Microbial database

London

A COMPUTER database designed to make microbial culture collections more accessible to industry has been set up at the UK Laboratory of the Government Chemist (LGC). It contains data from the National Collection of Type Cultures, the National Collection of Yeast Cultures, the CAB International Mycological Institute and the National Collections of Industrial and Marine Bacteria.

According to the systems designers, "eventually it will contain data from all the UK National Culture collections enabling subscribers to search from over 30,000 strains. The system is housed on LGC's GEC minicomputer and users can access the information either on-line to the computer or by means of a postal telephone enquiry service. B. J.

\$450 million for these activities.

The Pentagon maintains that the Soviet Union has had an operational ASAT system since 1982. The Soviet system is said to be ground-launched and to use radar to find its target, destroying it with an on-board bomb. Although DoD is keen to move forward with an ASAT programme, some say this effort is misguided, because DoD is far more dependent on satellites for communications and intelligence than are the Soviet defence services. Many feel an ASAT treaty should at least protect satellites in geosynchronous orbit, as these are critical for electronic surveillance.

Strengthening US ASAT capability is one component of the new DoD Space Policy, signed by Defense Secretary Caspar Weinberger on 4 February. Reaffirming US interest in the military potential of space, the policy statement says that space is "a medium within which the conduct of military operations can take place, just as on land, at sea and in the atmosphere".

The new document replaces one in effect since 1982. One change will be the attention paid to the potential for using men in space to support military objectives. According to Philip Kunsberg, assistant deputy under secretary of defence, "most military functions that we're aware of today can be performed better by machines without man's presence". But Kunsberg asserts that DoD wants to keep its options open for the future.

The DoD space policy specifically endorses the use of both the shuttle and expendable rockets for launching military payloads. DoD has moved aggressively to obtain expendable launch vehicles for its transportation needs, something the advisory council to NASA (National Aeronautics and Space Administration) last week urged that agency to do as well.

The debate over ASAT has been reopened at the same time as a debate over the interpretation of the antiballistic missile (ABM) treaty. Senator Sam Nunn (Democrat, Georgia), chairman of the Armed Services Committee, is leading the congressional push to retain the narrow interpretation he says is justified by the negotiating history and ratification debate. But this would prohibit many planned SDI activities.

The Reagan administration has been considering taking a broader approach to the treaty's provisions, a move that will probably provoke an angry reaction from both Congress and US allies in Europe. The Soviet Union, on the other hand, has proposed an international mechanism for verifying that no weapons are launched into space. Joseph Palca

East German AIDS

London

THE Institute of Clinical Immunology at East Berlin's Charite hospital has produced monoclonal antibodies against the (HIV) human immunodeficiency virus responsible for AIDS (acquired immune deficiency syndrome). The Charite team see this as a step towards developing antibody-linked drugs to combat the virus. The announcement was made on by Professor Ruediger von Baehr, head of the research team, on East German television.

East Germany has a well-developed AIDS information service and was prepared to discuss the risks to homosexuals and multi-partner heterosexuals at a time when other socialist countries took the official line that such sexual activity was a symptom of 'decadent capitalism'. But the East German media coverage of AIDS is not as explicit as the recent Warsaw television transmission which showed two men in bed together, one removing a condom from its packet. V. R.

Crafoord prizes 1987

London

THE Crafoord Prize for 1987 will go to Professor Eugene P. Odum of the University of Georgia and Professor Howard T. Odum of the University of Florida, for "fundamental findings which have strongly promoted our understandings of the dynamics of natural systems and formed a scientific basis for the long-term exploitation of the natural resources including pollution abatement", the Royal Swedish Academy of Sciences has announced. The Crafoord Prize, established in 1982, was endowed by the late Holger Crafoord (inventor of the blood dialysis machine) and his wife Anna-Greta Crafoord, and rotates around the branches of science not covered by the Nobel prizes. V. R.

Mars goal for NASA

Washington

TOP-LEVEL US NASA (National Aeronautics and Space Administration) officials and four independent observers last week discussed future long-range goals for NASA. The previous day the NASA advisory council task force on space goals had recommended that the exploration of Mars be given top priority.

Other goals discussed at the meeting included study of Earth systems from space, an enhanced Solar System exploration and the establishment of a permanent base on the Moon. But none of these was thought to be as attractive as a "bright new vision of Mars".

Although no timetable has been set, contractors will meet on 31 March for a pre-bid briefing on a Mars rover/sample return mission tentatively scheduled for 1998. Meanwhile, Mars Observer remains postponed from a 1990 launch, to 1992. C. E.