Star wars

New hope for US space platform

Washington

PRESIDENT Reagan's controversial suggestion last March that the United States should build a futuristic system of defence against nuclear attack may turn out to have given the National Aeronautics and Space Administration (NASA) a winning argument in its campaign to build a manned space station by 1991. Leaks from a panel set up by the White House to examine the President's "star wars" concept suggest that its report, due to be completed next month, will say that development of a space station might be essential to test the precise pointing systems and mirrors required by a space-based defence.

Without the happy coincidence of the President's "star wars" initiative, NASA's chances of winning approval for the space station were distinctly shaky (see *Nature* 18 August, p.574). The agency's administrator, James Beggs, maintains that a space station is the logical successor to the shuttle and the best way of maintaining US leadership in space. But the National Academy's space science board declared last month that there was no immediate scientific justification for a manned station, and many in Congress and the

Air Force is anxious to see the size of the shuttle fleet and its spares increased. It also wants NASA to develop an extended mission orbiter, an upper stage and a tele-operated manoeuvre system for the shuttle.

The Air Force may be forced to change its priorities if the White House "star wars" panel, itself chaired by a former NASA administrator, James Fletcher, sings the praises of the space station. The Department of Defense is also coming under mounting pressure from its own advisers to adopt a more flexible attitude to its possible military uses. A report released last week by the Air Force Scientific

Advisory Board warned that while no existing missions required the use of a space station, future missions might. Potential new missions listed in the report include a space-based antimissile defence.

A change in the attitude of the Pentagon, combined with a desire to defuse the electoral challenge from John Glenn, may tip President Reagan's decision NASA's way. But identifying the space station too closely with the President's plans for a watertight defence against nuclear attack may jeopardize the space station's chances in Congress. Many congressmen who favour building a space station will withdraw their support if a vote for the station can be construed as a vote for building a nuclear defence that is widely regarded as unworkable.

Peter David

UK weapons tests

Search for damage mounted

THE National Radiological Protection Board (NRPB) has announced its detailed plans for a survey of cancer incidence and mortality among more than 12,000 civilians and ex-servicemen who participated in British nuclear weapons tests, including atmospheric explosions and other unspecified experiments, in Australasia between 1952 and 1958.

The study was commissioned by the Ministry of Defence after press reports earlier this year alleged that safety measures during the tests and in subsequent clean-up operations were inadequate. However, a review of the Australian tests carried out this year by the Australian Ionising Radiation Advisory Committee found no evidence of serious safety lapses, and the British Ministry of Defence has steadfastly maintained that, even by today's standards, safety measures were "sufficient to ensure that no test participant was exposed to any significant risk of injury or disease".

Last April, a preliminary study by Professor E. Knox of the University of Birmingham's Department of Social Medicine found unusually high levels of self-reported leukaemias and other neoplasms of the reticuloendothelial system among test veterans. However, Knox *et al.*'s conclusions depend entirely on the number of individuals involved in the test programme, and conflicting answers have been given to this question. The NRPB study will avoid the problem by comparing cancer mortality and morbidity in test personnel with data from a "control" group of servicemen who were also in the tropics at the time but not near the test locations.

NRPB's study protocol reveals a surprising ignorance about the identities of those involved. Some 12,000 names have already been assembled by the Ministry of Defence, but it is clear that the list is far from complete. According to Dr John Reissland, who heads the NRPB team, this is because military records are arranged ac-

cording to individuals' names, rather than by operations. Self-reported cancer cases will also be assessed by the board, but, in order to avoid bias, these will not be included in the main study. Mortality information and cancer registrations will be obtained from the National Health Service's Central Register, which records all cases of cancer diagnosed in Britain since 1945.

Mr David Alton, a Liberal Member of Parliament who has been pressing for a study on test veterans since early this year, is not happy that the commission has gone to NRPB. "NRPB is too closely identified with the government", Alton says, and the public will not be confident that the survey is unbiased. Alton will also be pressing in Parliament for changes in the law to allow test veterans to claim compensation.

Dr Reissland explained last week that the NRPB contract ensures that the Ministry of Defence will have no control over what findings are published, and that because the study will not require access to classified material, the ministry will not be able to exert even indirect control. A study of safety measures that will require privileged access is being kept separate for this reason. All findings will be published in full, but because tracing all those involved is likely to be time-consuming, results may not be available for at least two years.

Others have reservations about the scope of the NRPB study. Professor Joseph Rotblat, a radiologist who worked on the weapons programme, wants to see a similar study done on the incidence of cataract, which will not be considered by NRPB. In collaboration with Mr Anthony Bron, Rotblat has found among veterans of tests at Christmas Island, 25 self-reported cases of posterior subcapsular cataract, a rare type almost unknown in men of this age. Rotblat suggests that either accepted threshold levels of radiation for cataract formation are substantially in error or that dosage was higher than the ministry admits.

Tim Beardsley

Office of Management and Budget (OMB) believe an unmanned system could achieve similar goals for less money.

The weakest point in NASA's argument has until now been the frosty attitude of the Pentagon. Richard DeLauer, Under-Secretary of Defense for research and engineering, said last August that the Department of Defense could not identify a single military mission that could be better carried out by a space station than by the shuttle or an unmanned spacecraft. And senior Air Force officials continue to express concern that building a space station would distract NASA from further development of the shuttle.

According to Charles Cook, its deputy assistant secretary for space policy, the US