6 FLIGHT International, 6 January 1979

F-5G to be new

US export fighter?

NORTHROP's single-engined F-5G
proposal may be about to get a re-
prieve. The design was originally in-
tended for export to Taiwan, but the
sale was vetoed in October by Presi-
dent Carter, who may have considered the F404-powered aircraft too ad-vanced to take the place of earlier F-5 versions as America's leading export fighter.
The F-5G may have received a shot in the arm in the form of a speech by the US Under-Secretary of State for Security Assistance, Science and Technology, Lucy Wilson Benson. Speaking earlier this month at a Washington seminar sponsored by the American Defence Preparedness Association, she said that the US "needs a follow-on to the F-5E series" and that there should be an "export-only" version of the aircraft which would be less capable than its US counterpart. Reports from Washington suggest that both the F-5 and a "de-rated" F-16 are being examined in State Department/Pentagon studies aimed at finding a new US fighter suitable for large-scale export to a wide variety of customers.
McDonnell Douglas recently entered

the lists, proposing a version of the F-4 optimised for the air-superiority role. The F-4T would have no ground-attack equipment and would carry a digital computer to control the launch of its missile load of either six AIM-7 Sparrows or four Sparrows and four AIM-9 Sidewinders (see Flight for December 9, page 2077). Taiwan is reported to have expressed interest in an air-superiority FA when it was learned that Carter had vetoed the

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F-5G offer in favour of the F-5E. From the US point of view, to keep unit costs down it would seem logical to base any future export fighter on an aircraft which is to enter the US inventory. In this respect the F-16
(and perhaps a very much derated F-18) are obviously the prime con-
tenders.

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Northrop's F-5E Tiger II is the current US export fighter, following the earlier F-5A Freedom Fighter.
Indonesia is the latest customer, having ordered 15 F-5Es

GD to build advanced-technology F-16

GENERAL DYNAMICS is to flight-
test a modified F-16 equipped with the
latest in fighter technology. A digital
flight-control system and additional
canard surfaces will be fitted, and the
aircraft will begin the Advanced Fighter Technology Integration (AFTI) programme in June 1981. A modified McDonnell Douglas FL

15 was the
other contender in the competition for the $34-3 million contract.

Outlining the programme's objec-tives, Dr Ruth Davis, Deputy Under-Secretary of Defence for Research and Advanced Technology, said that the canards would allow the pilot to move the aircraft horizontally and vertically, independently of the flight-path. This facility will greatly improve target tracking. In air-to-air combat the pilot would have more time to aim his gun, and in air-to-ground opera-tions the accuracy of unguided bombs could be greatly improved. This tech-nology has already been pioneered on a YF-16 control-configured vehicle evaluated by the USAF in 1977.
The latter part of the programme, which is due to end in 1983, will con-centrate on proving electro-optical and radar target-tracking systems, the coupling of the flight and fire-control systems, and improved cockpit con-trols and multifunction displays. According to Dr Davis, a high-acceleration ejection seat is to be

evaluated. The seat-back angle is to be increased from 35° to 65°. This reduces the vertical distance between the pilot's head and his heart, lessen-ing the strain on the heart during high-g manoeuvres.
Tilting the seat further back will enable the pilot to withstand twice the turn rate of the present F-16 without blacking out. This increase in allow-able turn rate will reduce the time taken to bring weapons to bear on a target and, in the ground-attack role,
will permit fast pull-ups after a bomb-

ing run. This could reduce the time that the aircraft is exposed to hostile anti-aircraft fire to a third of today's level.
The AFTI programme will comple-ment other resarch, such as the Himat remotely piloted vehicle, designed to lay the foundations of the next genera-tion of fighters. The new technology involved promises to increase the manoeuvrability and survivability of
these future aircraft. The US firmly
believes that there is no substitute for research.

Smart SA M tests due next year
PLANS to develop a self-initiated
anti-aircraft missile (SIAM) for the
protection of US airfields and aircraft
carriers have been given a $1-3 mil-
lion boost by the US Army Missile
Research and Development Command, Redstone Arsenal, Alabama. Ford Aerospace is to carry out test firings of the 1501b weapon at the White Sands Missile Range, New Mexico, and off San Clemente Island, Cali-fornia.
Before the end of the year the Defence Advanced Research Project Agency plans to carry out "full sys-tem evaluation against airborne target drones". DARPA then plans to turn the missile over to the US Navy, since

the Army is handling only the initial stage of the programme.
SIAM will use radar automatic-acquisition seekers and a terminal infra-red homing head to automatically attack incoming aircraft and, presum-ably, cruise missiles. It is expected to be lOOin long and 5-7in in diameter, and will be fired from ground-based launchers or submarines. The latter version will work in conjunction with the parent submarine's acoustic detec-tion systems. For a long time anti-submarine aircraft have had things all their own way. If SIAM enters service, US submarines will be able to hit back at the vulnerable patrol aircraft for the first time.