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Helicopters successful in
US desert exercise
ROTOR blade erosion was a problem
for US Army helicopters operating in
the Egyptian desert during last
month's exercise but one that will be
easily overcome, say members of the
101st Air Assault Division. US forces involved in Bright Star '81, the first test of America's Rapid Deployment Force, found that helicopters could operate unseen using natural cover in what appeared at first to be feature-less desert.

Rubberised covering is now being applied to main and tail rotor blades to overcome sand erosion. A similar fix may be devised for blades on the OH-58 engine particle separator, for which the problem is more serious. Pilots who flew the observation heli-copters in Egypt say their aircraft needs better reconnaissance optics, a laser rangefinder for use with Tow-equipped AH-ls and a radar warning device similar to the Cobra's APR-39. The OH-58 is described as excellent for desert operations because it does not generate enough of a dust cloud to reveal its position. No power or con-trol problems were experienced. The UH-60A Black Hawk assault helicop-ter suffered from tyre blowouts be-

cause sand clouds restricted pilot vision and necessitated rolling landings over rocky surfaces. Self-sealing of solid tyres would overcome this.
The UH-60 auxiliary power unit had
a higher than normal failure rate but sand erosion did not affect the engine particle separators. The exercise did show the need for longer-range HF radios as the present UHF sets are limited to line of sight. FM radio range was cut by half. A thermal-imaging pilot's night vision system such as that used in the AH-64 would also be useful, pilots say, as would improved Doppler navigation. Doppler was used only as a backup to dead reckoning. One pilot suggests using Navstar satellite navigation.

The ten-day exercise left the overall impression "that there is no doubt that the helicopter can fight and survive in the desert." Constant manoeuvring was the key to success. Anti-tank pilots found that they could engage targets on their own terms. On one occasion 12 Black Hawks landed 200m behind the opposing force before being seen or heard. The uniform terrain and lack of visual cues did make flying more tiring than expected, however.

Go-ahead for USMC helicopter
US MARINE CORPS plans to replace
CH-46 and CH-53 medium-lift helicop-
ters have passed their first milestone.
The US Defence Department has approved the "mission element needs statement" (Mens) which sets out the case for a new aircraft. The first funds, some $5-6 million, will be sought in the 1982 budget. The Mens calls for accelerated development and an in-service date of]990. A request for proposals from industry will be issued in the spring.

Candidate designs include modifica-tion of off-the-shelf helicopters, CH-46 life extension or a new-design air-craft, possibly using tilt-rotor or advancing-blade technology. HXM will be required to carry 18 to 24 troops and may be fitted with a self-defence weapon system. The new helicopter will replace some 275 USMC CH-47S and 150 CH-53s and may be adopted to replace US Navy and some Air Force aircraft. Sikorsky may propose a version of the UH-60.

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DEFENCE

Austrian in F-16/79
AUSTRIAN Air Force chief test pilot Col Josef Bernecker is the first over-seas pilot to fly the General Dynamics F-16/70 export fighter. Col Bernecker flew three times in a two-day evalua-tion of the aircraft which is short-listed for a 24-aircraft Austrian order along with the FlOO-powered F-16A and the Dassault-Breguet Mirage 50. Col Bernecker heads the interceptor evaluation team and flew the F-16A four times in September.

The private-venture F-16/79 has completed 55 sorties logging more than 49hr as we go to press. The flight-test programme will end soon with a few check flights by US Air Force pilots; then the two-seat air-craft modified from a development F-16, will begin customer demonstra-tions. The 18,0001bthrust General Electric turbojet in the F-16/79 has been designated officially the J79-GE-119, having been provisionally labelled the J79-17X.
• The US Air Force has just accepted its 300th F-16 Fighting Falcon. Total F-16 flying time including prototypes and development aircraft is around 50,000hr.

Foxbats for India? •
INDIA is to receive MiG-25 Foxbat Mach 3, high-altitude combat aircraft, *l reliable reports from the country in- . dicate. The deal, for an unspecified number of aircraft, is for recon-naissance and trainer derivatives. Foxbats have been supplied in the past to Algeria and Libya—usually flown by seconded Soviet pilots— mainly for propaganda and covert reconnaissance duties. ~*

In October Contraves and Raytheon tested the Skyguard-Sparrow air defence system at China Lake Naval Weapons Centre, Calif. Three mis-siles, one AIM-7E and two AIM-7Fs, were fired and guided successfully by the Skyguard fire-control system. Here, an AIM-7F downs a QF-86

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