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year nine units took part with Harriers, Buccaneers and Phantoms in addition to the Jaguars.

SR-71 world records claimed
The Lockheed SR-71 Blackbird, in three flights over remote desert areas of California and adjoining states at the end of last month, set six world speed and altitude records, the com-pany reports. On flight one, the air-craft set absolute and class records for the 1,000km closed circuit of 2,086 m.ph., 3,356km/hr. This record had previously been held by a MiG-25 Foxbat which in 1967 flew the course at 1,853 m.p.h.

On the second flight, absolute and class records for the 15km-25km straight course were set at 2,189 m.p'.h., 3,522km/hr. These records had previously been held by the Black-bird's "sister" aircraft, the YF-12A intercepter prototype, which achieved 2,070 m.p.h. some 11 years ago. New absolute and class altitude records in horizontal flight were set on the third flight at 86,000ft, 26,212m. These had also previously been held by the YF-12A at 80,258ft. As required by the Federation Aeronautique Inter-nationale, final data on the flights collected by observers at Edwards AFB are being sent for certification.

Rescue awards
Two Royal Air Force helicopter pilots from C Flight, 202 Sqn, RAF Leuchars, have been awarded the Queen's Commendation for Valuable Service in the Air for rescuing five stranded climbers in the Scottish Highlands last March.
Fit Lt John Stirling flew five missions over three days and on one night rescue had to be guided to the casualty by a climber holding a torch. Conditions during the rescue were so bad that at times the falling snow cut the visibility to zero, and the wind was gusting to 60kt. Over the five missions, four casualties were evacu-ated and a 5hr search for a missing woman over the island of Coll proved negative. A total of 12hr 25min was flown.

Fit Lt Richard Day rescued a climber trapped by an avalanche near Braemar in conditions described by the mountain-rescue-team leader as the worst in which they had ever been called out. With visibility down to a few feet and air currents threatening to throw the aircraft on to a massive buttress, Fit Lt Day managed to> get the casualty winched to safety and then flew sideways down the mountain side with his rotor only a few feet from the rock face.

Appointments
Air Chief Marshal Sir Andrew Humphrey has been promoted to Marshal of the Royal Air Force before taking up his new appointment as Chief of the Defence Staff in October. Replacing Sir Andrew as Chief of the Air Staff is Air Chief Marshal Sir
Neil Cameron.

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RAF and Ministry defend ADV A

N APPARENT lack of any projected
manoeuvring threat to the
• United Kingdom and Eastern
Atlantic areas in the 1980s and 1990s
is at the very heart of the Royal Air Force's acceptance of the Air Defence Variant (ADV) of the Panavia Tor-nado'. "The ADV is designed to inter-cept and destroy the bomber threat," according to Air Vice-Marshal J. M. Nicholls, giving evidence to the parlia-mentary Expenditure Committee's defence sub-committee.*

The committee's previous recom-mendations on the Tornado have re-flected the fact that it has not been convinced that the ADV will be able to perform all the tasks allotted to it in the UK and Germany as an inter-cepted and air-superiority fighter (see Flight for March 13, page 632). AVM Nicholls, admitting that the aircraft would not be as good as the F-15 as a combat fighter, said that it was good enough to deal with the job it had to do. Coping with the threat posed by high-performance Warsaw Pact fighters was part of the job under-taken by other parts of the Nato air forces; in his opinion it would not be possible to derive from the Tornado an aircraft suitable for the air-superiority role against such fighters.

Speed and ceiling
"Are you satisfied that the ADV will have the performance," asked the committee, "in terms of speed and ceiling to catch any Warsaw Pact air-craft which are foreseen as having the capability to penetrate the fUK air-defence] region in the next 20 years?" Mr J. H. Nelson of the Minis-try of Defence replied: "Yes, in prac-tical terms," but the remainder of his answer and the following two ques-tions were deleted from the evidence.

"With precision guided missiles, is not Foxbat an aircraft which might pose quite a threat?" continued the committee. "So is any other aircraft," replied AVM Nicholls, "but to launch such a missile an aircraft must operate at the sort of speeds and heights at which the ADV can intercept. ... I believe that it would be more likely that such a missile would be launched from considerable range rather than close in."

From special studies, said AVM Gilbert, it seemed likely that the prin-cipal threat to the UK air-defence region and the Eastern Atlantic would be from Backfire—although further evidence was deleted, "it is a very formidable threat indeed and is very worrying," said the AVM. The only other aircraft that the RAF could be-lieve was capable of performing "that kind of task" (presumably stand-off missile attack of shipping and hard

*Expenditure Committee (Defence and External Affairs Sub-c ommittee), minutes of evidence, Tuesday 27 April 1976. Multi-Role Combat Aircraft: Air Defence Variant. HMSO, 50p.

targets in UK) is Fencer, and "against those threats we consider that the ADV is certainly man enough for the task."
Asked at what sort of ceiling the RAF expected Backfire to operate. AVM Nicholls said: "We know its capability now, but they still have to develop weapons for it. If it carries what we would consider an opera-tional load, it would probably fly only in the middle to upper ... bracket, at speeds below Mach 2, which is within the capability of the MRCA/ADV."

Patrol time shortfall
An unpublished paper on the ADV prepared by the Ministry for the com-mittee indicated that there would be a shortfall of 20-30 per cent on the combat air patrol (CAP) time com-pared with the Air Staff Requirement. How serious was this shortfall, asked the committee. The requirement for CAP time is given in round hourly terms and is also geared to tanker availability, according to AVM Nicholls. "In this particular case, where there is an apparent shortfall, it is because the technique which is used in calculating the ADV's time on CAP assumes that the refuelling takes placfe as soon as the ADV arrives on its CAP position.
"That of course does not allow it
to use the fuel that it brought with it essentially.... However, in practice what happens is that the refuelling is delayed until the aircraft has reached a point where it has the calculated amount required for any combat it might engage in plus the amount re-quired to return to base. Therefore this gives a period from the start point until so many hours and minutes later and in the event the ADV would meet the Air Staff requirement."

Significantly better
Air Cdre D. Harcourt-Smith con-firmed that the CAP performance of the ADV was "significantly" better than that of its predecessor, the Phan-tom, and AVM Gilbert added: "To the best of my knowledge the ADV is the best aircraft we have examined for CAP capability.... It is peculiarly a very good aircraft on CAP." In round terms it is understood to have twice the CAP time of the Phantom. If a decision had been made in 1973 to uprate the RB.199 engine, the com-mittee wanted to know, to what extent would the fighter deficiencies of the' ADV have been circumvented. "Not a great deal," replied Dr W. Stewart of the MoD. "The performance which we have included in the [unpublished] report is, in quite a number of aspects, better than the performance we offered last time. That is because, in optimising the engine design as a result of flight experience, we have settled on an Arrangement which gives us slightly more thrust and slightly worse s.f.c.