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## TRAINING WITH THE FRENCH

In my minute of 21 April I told you of the proposed RAF training exercise with French Air Force Mirage and Etendard aircraft on 22 and 23 April.

Secretary of State may be interested to see the attached signals from RAF Wittering setting out some of the lessons learned from the exercise.

24 Apr 82

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IMMEDIATE

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UNEXIS

SE C R E T UK ÉYES BRAVO
SIC AAA/KAB/19F
REFERENCE EX TYPHOON SORTIES FLOWN HARRIER VERSUS FAF MIRAGE
AND SUPER ETENDARD. WE FLEW SIX SORTIES ONE VERSUS ONE WITH
MIRAGE AND ONE SORTIE ONE VERSUS ONE WITH SUPER ETENDARD IN
ADDITION TO SIX SORTIES TWO VERSUS TWO AGAINST MIRAGE AND SUPER
ETENDARD. EXCELLENT TRAINING VALUE FROM THIS EXERCISE FOR 1 SQN
PILOTS CONCERNED. AT FACE TO FACE DEBRIEF TODAY WE LEARNED A LOT
ASOUT TACTICS AGAINST THESE AC PLUS MANY DETAILS OF WEAPON
SYSTEM PERFORMANCE. WE ARE NOW CONFIDENT THAT WE KNOW ENOUGH
ABOUT THESE TWO LIKELY ADVERSARIES

DSC CAF OS) LIKEY SB

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ZYY SSSSS 0 231650Z APR 82 FK RAF WITTERING TO RBDTYR/HQ 38 GP INFO RBDTY1/HQSTC RBDWGR/MODINK ALR

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S E C R E T UK EYES BRAVO SIC AAA/19F/KAB

FURTHER TO OUR AAA/19F/KAB 231650Z APR ADDITIONAL INFORMATION IS AS FOLLOWS:

PARA 1. RWR. RADARS FOR BOTH MIRAGE AND ETENDARD OPERATE IN INDIA BAND BUT ARE INEFFECTIVE BELOW 5000FT. AT MEDIUM LEVEL CANNED MANGEUVRES REVEALED THAT RWR ALARMED ONCE LOCK UP ACHIEVED WITH STEADY INDICATION OF PULSE INDIA. POOR QUALITY OF AUDIO WITH HARRIER RWR NEGATED ANY WORTHWHILE USE OF AUDIO IN

RADAR ACQUISITION MODES
PARA 2. MIRAGE AIRCRAFT PERFORMANCE. AIRCRAFT HAS EXCELLENT RATE
OF TURN AT SPEEDS IN EXCESS OF 350 KTS. BELOW 350 KTS MIRAGE IS
STILL MANOUVERABLE BUT WILL NORMALLY LOSE TO A HARRIER IN A SLOW
SPEED FIGHT. MIRAGE TACTICS SHOULD THEREFORE BE TO REMAIN FAST AND
MAKE SLASHING ATTACKS. HOWEVER EXPERIENCE OVER LAST 2 DAYS HAS
SHOWN HOW WILLING THE FAF PILOTS HAVE BEEN TO ENGAGE IN SLOW SPEEDCOMBAT. ONCE COMMITTED TO COMBAT MIRAGE HAS LITTLE ENDURANCE AND

QUICKLY RUNS OUT OF FUEL
PARA 3. MIRAGE WEAPON SYSTEMS. FACE TO FACE DEBRIEF WITH FAF PILOTS

REVEALED FOLLOWING INFORMATION:

ALFA. GUNS. ALTHOUGH MIRAGE RADAR CAN BE USED TO GIVE RANGE INFORMATION, AIRCRAFT GUNS ARE INEFFECTIVE AGAINST TGTS AT ULL BRAVO. R530. OWING TO RADAR CLUTTER R530 CANNOT BE LOCKED UP BELOW 5000FT. IT HAS THEREFORE NO LOW LEVEL CAPABILITY. AT ML HOWEVER IT DOES HAVE A HEAD ON CAPABILITY. IT IS THOUGHT THAT IR HEAD FOR THIS MISSILE IS AVAILABLE

CHARLIE. R550. THIS MISSILE HAS SIMILAR CAPABILITY TO AIM 9 G/L MAX LAUNCH RANGE IS APPROX 2000 YDS AND MISSILE CAN BE FIRED UP TO A MAXIMUM OF 50 DEGREES ANGLE OFF. MISSILE HAS VERY SHORT TIME OF FLIGHT AND CAN PULL UP TO 45G. FLIGHT PATH IS INITIALLY JERKY BUT IN LATTER STAGES IS CONSTANT SIGHT LINE, MISSILE HAS A KILL CAPABILITY WITHIN A MISS DISTANCE OF 25 FT. MINIMUM LAUNCH ALTITUDE IS 150 FT AND SUCCESSFUL TRIALS HAVE BEEN CARRIED OUT AGAINST TARGETS AS LOW AS 50 FT. EFFECTS OF IR DECOYS ARE NOT KNOWN BUT MISSILE DOES RETAIN EFFECTIVENESS UP TO WITHIN A 20 DEGREE

SEMI-ANGLE OF THE SUN
PARA 4. HARRIER TACTICS. GR3 TACTICS MUST BE TO REMAIN AT LOW
LEVEL IN ORDER TO MINIMISE EFFECTIVENESS OF MIRAGE SYSTEMS. EVEN
AT ULL, TURNING WILL INCREASE CHANCES OF KILL BY R550 OR GUNS.
SEA HARRIER PERSONNEL ALSO PRESENT AT FACE TO FACE DEBRIEF AND WILL
HAVE MADE THEIR OWN ASSESSMENT OF OPTIMUM SEA HARRIER TACTICS
PARA 5. EXCELLENT RESPONSE BY FRENCH AIR FORCE AND NAVAL UNITS AT
SUCH SHORT NOTICE MUCH APPRECIATED. DACT PROGRAMME AND FRANK FACE TO
FACE DEBRIEF OF GREAT VALUE IN PREPARATION FOR OPERATION CORPORATE

BT

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DSC (AF OPS)

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