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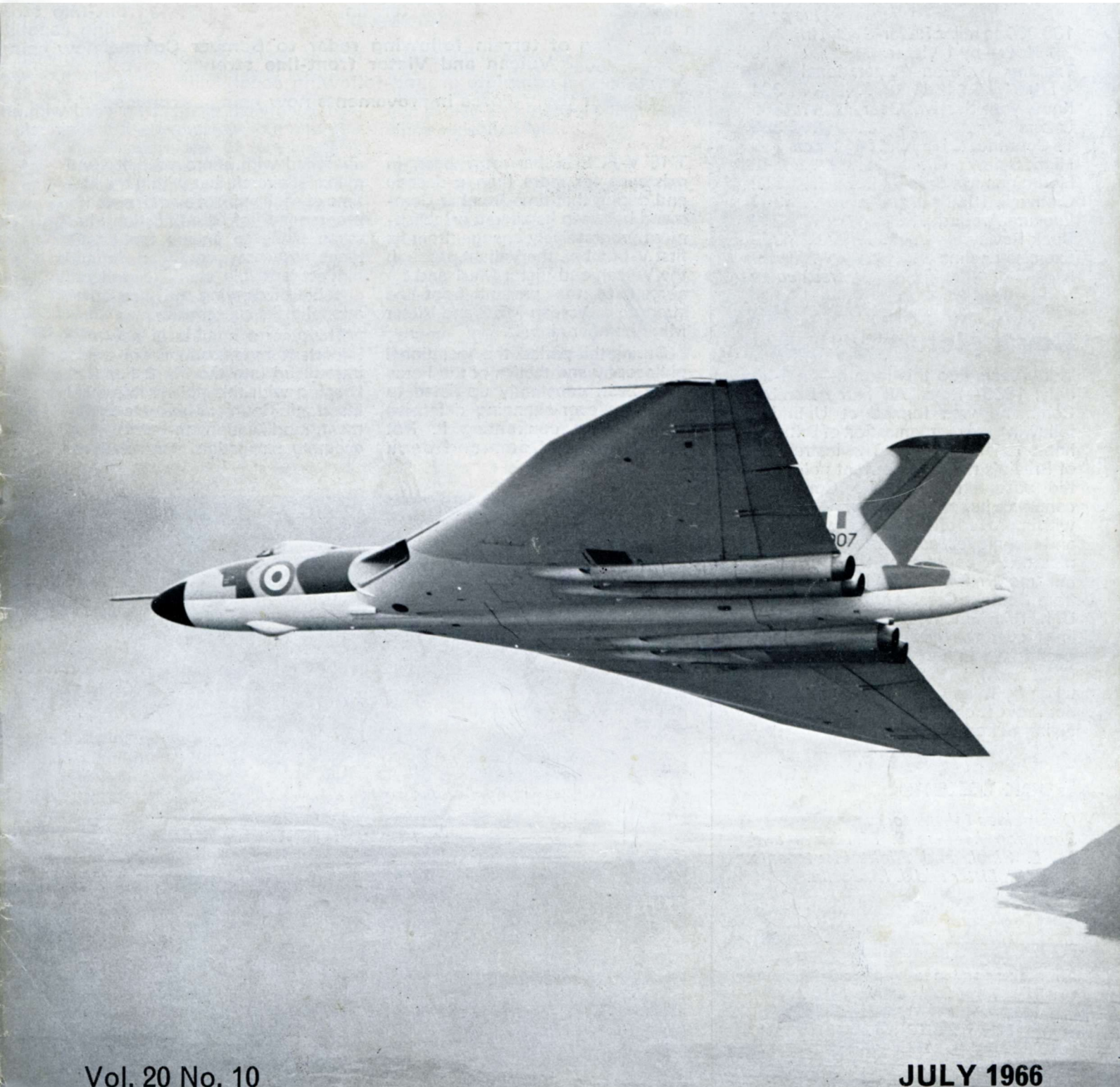
AIR CLUES

The Royal Air Force Magazine



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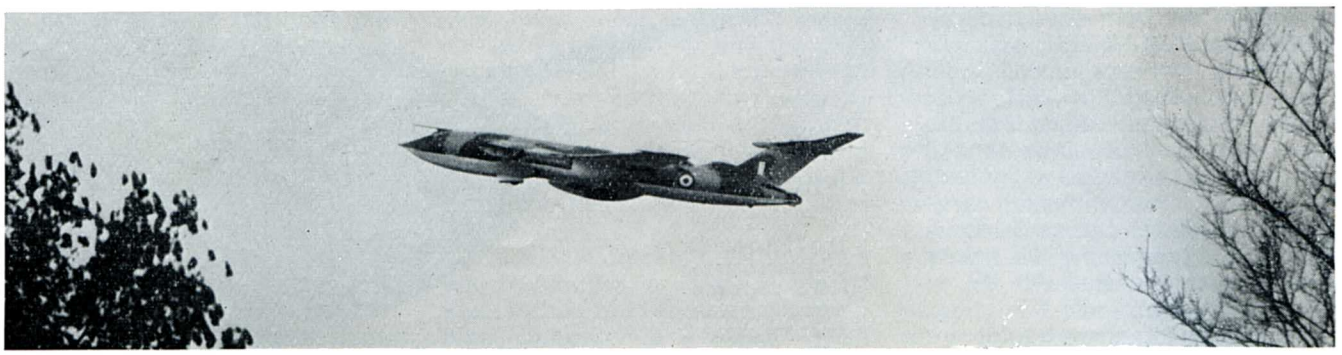


130,000 sq miles radar-swept in 1 hour—by 1 Victor

THE Royal Air Force now has an improved air reconnaissance capability—with the strategic reconnaissance Mk 2 Victor aircraft which equip Bomber Command's No 543 Squadron at RAF Wyton.

The Squadron provides a major contribution to the effectiveness of the United Kingdom Reconnaissance Force. Its new aircraft—designated Victor B/SR Mk 2—has a performance in terms of range, speed, height and operational effectiveness in excess of its predecessor, the Vickers Valiant B(PR) Mk 1, which was withdrawn in 1965 after serving with No 543 Squadron for ten years.

The range of the Victor is at least 40 per cent greater than that of the Valiant, while its capability for photographic coverage is more than double. With its improved radar equipment, the new Victor can map with radar an area of 750,000 square miles in six hours. Five Victors could cover the whole of the Atlantic in less than seven hours, and on a single sortie could produce radar photographs for a mosaic of the whole of the Mediterranean which would enable a count of every ship to be made.

The Victor carries over three times more photoflashes for night photography than the Valiant, and is also fitted with improved navigational equipment enabling a higher standard of accuracy to be attained. A new Rapid Processing Radar Unit is carried which provides in-flight processing of a continuous strip record of the radar picture obtained by the aircraft.

The F96 reconnaissance cameras carried in the Victor have a superior performance to the cameras carried in the Valiant and Canberra PR7 aircraft. The cameras can also be fitted with lens cones of various focal lengths thereby providing operational flexibility. Forward coverage is three times more than before because more film can be carried in the magazines, and lateral cover on each flight-line is increased by mounting a fan of up to eight cameras so that the area covered overlaps on each camera. All the equipment is designed to provide intelligence at the largest possible scale with high resolution and minimum distortion for detailed photographic interpretation. The Squadron is supported in its role by a team of photographers and photographic interpreters.

Although colour photography has not been widely used for military purposes since the end of the Second World War—mainly because image quality was poor and processing costly in terms of time and money—recent improvements in the quality of colour emulsions have given cause for an optimistic reappraisal. To this end, No 543 Squadron is currently taking part in a trial to evaluate colour photography for intelligence and survey purposes.

Wg Cdr A. W. Tarry, previous OC No 543 Squadron, hands over to the present CO, Wg Cdr R. H. McV. Redfern (right).

The longest-yet un-refuelled flight leg by a Victor aircraft was flown by Victor XL 165 (seen above) of No 543 Squadron, RAF Wyton, on 31st May. It was also an unofficial speed record flight—the 3896 nm from Piarco (Trinidad) to Wyton being covered in 8 hours 21 minutes 20 seconds.

Captain of the aircraft was Flight Lieutenant M. J. B. Haley, co-pilot being RAF Wyton's Station Commander, Group Captain A. H. Chamberlain, AFC. Wing Commander R. H. McV. Redfern, OC No 543, was nav plotter; Flying Officer D. J. Magee, nav radar, Flight Lieutenant I. R. J. Nieland, AEO; and Chief Technician R. Stewart, aircraft servicing chief. The Victor was being flown back from detachment after taking part in the Guyana independence celebrations.

A fairly recent innovation in air photography is infra-red false colour which can give a more effective penetration of camouflage than infra-red black and white film. The terrain is depicted in bright contrasts of yellow, magenta, and blue and a small quantity of this film was exposed during a training flight over the Yorkshire Moors by a Victor of No 543 Squadron, when the RAF assisted the police during their investigation of the "Murders on the Moor" case last year.

For air survey work, the Victor will carry an improved F49 Mark 4 Survey Camera with twice the magazine capacity of the earlier mark carried by the Valiant. The camera has a new lens that is superior to any wide-angle lens system yet provided for the RAF, and has many other refinements to improve the quality of survey photography generally.

Much of the squadron's flying effort during peacetime is devoted to training for the war role and, in the survey field, in addition to photography, the Squadron's radar reconnaissance capability has been utilised in surveys of ice formations in northern latitudes; examination of the seasonal variations of ice formations in the St Lawrence Seaway and Norwegian Sea have been of particular value. Other tasks have included photographic survey at

(concluded overleaf)

A crew is seen above being briefed for a major survey by Major R. M. Silberrad, MBE, RE, OC Survey Liaison Staff at RAF Wyton. The crew, (left to right) are Flt Lt C. W. M. Lister, nav plotter; Fg Off J. A. Glenton, AEO; Fg Off P. M. Yorke, co-pilot; Flt Lt E. F. Huntley, captain; and Fg Off G. Hipperson, nav radar.

Left:
The crew then receive a photographic briefing, by Flt Lt J. D. Christison (second from left), No 543 Squadron Photographic Leader.

Below:
The complete crated assembly of photographic equipment is ready to be hoisted into the bomb bay. On the left are photographers SAC A. Foden and Corporal W. R. Burgoyne.

short notice of disaster areas such as the earthquake at Agadir and the effects of "Hurricane Hattie" in British Honduras.

No 543 Squadron, now commanded by Wing Commander R. H. McV. Redfern, has completed many photographic reconnaissance tasks with its Valiant aircraft in Aden, Australia, Canada, Malaya, America, Malta, Thailand, Kenya, Pakistan and Cyprus, to mention only a few countries. Valuable contributions have been made by the Squadron in the fields of forestry planning, housing planning, tidal survey and land survey for the production of maps. Now, with the improved performance of the stragteic reconnaissance variant of the Victor Mk 2 aircraft, improved radar and the latest cameras, the Squadron is fully confident of meeting the tasks assigned to it in the future.

PILOT'S NOTES

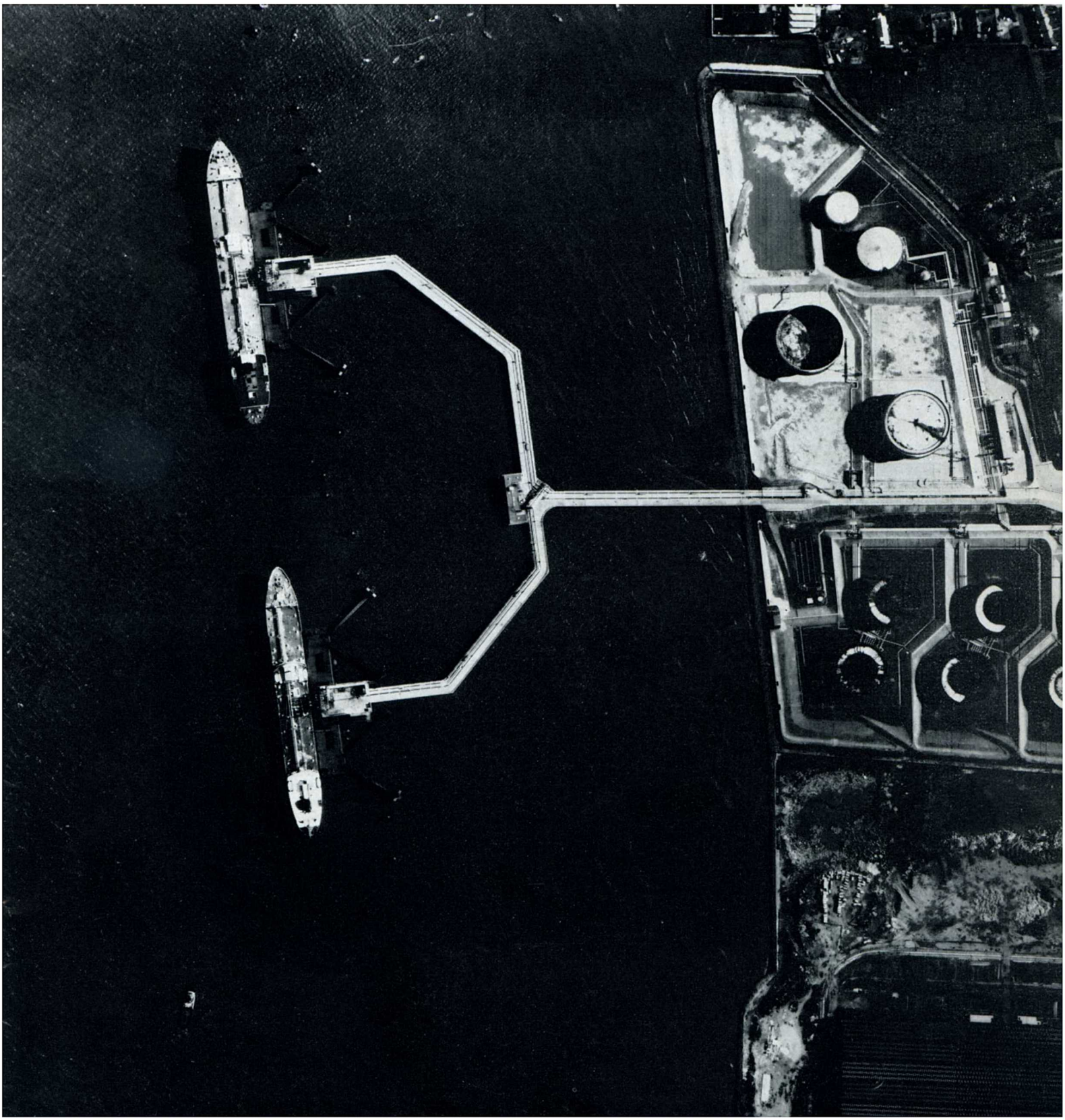
Recent editions and amendments:

Canberra B15/16; AL6 to AP 4326P & Q-PN; January 1966.
Victor B Mk. 1 & 1A; AL5 to AP 4506A & C-PN; March 1966.
Dominie T Mk 1; AL3 to Advanced Notes; March 1966.
Lightning F Mk 2; AL3 to AP 4700B-AP; March 1966.
Lightning T Mk 4; AL4 to AP 4700D-PN; March 1966.
Beaver AL Mk 1; AL4 to AP 4763A-PN; March 1966.
Andover C Mk 1; Advance Pilot's Notes; March 1966.
Wessex CC Mk 2; AL2 to AP 4723B-PN; March 1966
Scout AH Mk 1; AL5 to AP 4780A-PN; April 1966.
Lightning F Mk 6; Supplement to AP4700C-PN; April 1966.
Sioux Mk 1; AL1 to AP101C-0201-15; April 1966.

Recent Flight Reference Card issues:

Canberra B15/16; Issue 6; January 1966.
Belfast C Mk 1; AL1 to AP101B-0101-15 FRC; February 1966
Lightning T Mk 4; Issue 3; March 1966.
Beaver AL Mk 1; Issue 4; March 1966.
Andover C Mk 1; Issue 1; March 1966.
Lightning F Mk 6; Issue 1 (Gummed amendment to Mk 3 ER-FCR); April 1966.
Victor B Mk 2; AL8 to AP4506B FRC; March 1966.

These two pictures, taken at the same time from 15,000 feet, show a scene on the Mersey revealed in different detail by the



F-49 6-inch camera (left) and the F-96 48-inch camera. Taken from a No. 543 Squadron aircraft.