



# MINISTRY OF DEFENCE

## Military Aircraft Accident Summaries

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### ACCIDENT TO ROYAL AIR FORCE PHANTOM FGR2 XV491

Date: 7 July 1982

Parent Airfield: RAF Coningsby, Lincolnshire

Place of Accident: 35 nm north of Cromer

Crew: One pilot, one navigator

Casualties: Two; pilot and navigator killed

#### CIRCUMSTANCES

XV491 was one of three Phantoms which took off from RAF Valley on 7 July 1982 to carry out Practice Interceptions (PIs) over the southern North Sea prior to landing at RAF Coningsby. After an uneventful transit at medium level, the aircraft came under the direction of a ground radar which was to control the PIs; they then separated into two elements, a fighter and two target aircraft which flew in loose formation.

During the sortie, the navigator in one of the Phantoms felt unwell, so the aircraft returned to Coningsby. The remaining two aircraft continued with a further PI with XV491 as fighter, flying at 250 feet amsl. Although there was patchy sea fog extending up to 200 feet from the sea surface, there was a clear horizon, no cloud, and the visibility was about 10 Kms. At the conclusion of the PI, XV491 was seen to pass down the target's right hand side, and was told to continue on heading to position for a final run at the target. The crew of XV491 acknowledged the ground radar controller's subsequent instruction to begin a left turn, but shortly afterwards ground radar contact was lost as the aircraft presumably descended. Unable to detect XV491 with their radar, the crew of the other Phantom asked for a height call from XV491; there was no reply and further radio calls failed to elicit any response. The aircraft was flown towards XV491's last known position but the crew were unable to make more than a cursory search before the fuel state necessitated a recovery to RAF Coningsby. Two other Phantoms were diverted from a training sortie to look for survivors or wreckage, but poor visibility and sea fog, now extending to 300 feet above the surface, hampered the search in the vicinity of XV491's last known position. A comprehensive air and sea search was mounted but no trace of the aircraft or its crew was found until sonar equipped RN helicopters detected signals from the aircraft's Sonar Locator Beacon some 12 hours later. Subsequent salvage operations recovered fragments of aircraft wreckage and the bodies of the crew. It was established that XV491 had hit the sea in an erect slightly nose up wings level attitude and had disintegrated on impact.

CAUSE

Some 33% by weight of the aircraft was recovered and examined by experts from the Accident Investigation Branch. In addition to determining the aircraft's impact parameters, it was established that the indicated ground speed had been 423 kts, the barometric altimeter had indicated 150 feet and that the radio altimeter low altitude warning lamp had been lit. It was deduced that the aircraft had been structurally intact, that the engines had been under power, that there had been no fire, that no major emergency had occurred and that neither pilot nor navigator had initiated ejection. A painstaking investigation enabled many possible causes of the accident to be ruled out. The erroneous altimeter reading could be explained by a postulated failure of the aircraft's Air Data Computer, but it was considered unlikely that this alone would have precipitated the crash. It was concluded that the pilot, in addition to being presented with the erroneous altimeter indications, may have been denied adequate visual references by the prevailing weather conditions, and had probably been distracted by some undetermined factor; in all probability this combination of circumstances caused him to operate in ignorance of his true proximity to the water. Nevertheless, because of the largely speculative nature of this deduction, the cause of the accident has been categorised as unknown.

SUBSEQUENT ACTIONS

Proposals to equip the rear cockpit of Phantom aircraft with a radio altimeter repeater, and to provide a low altitude audio warning for both crew members are being evaluated.

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