

## Analysis of Radar & Radar-visual sightings April 29 1957, RAF Ventnor, Isle Of Wight

Martin Shough

1.) In this case the statement that detailed flight plans of two Hawker Hunter fighters on an exercise were subsequently matched exactly to the two 2100 radar plots seems to leave no room for doubt. Small points to note, however:

*i)* The detailed Parliamentary answer states more than once that the pursued target departed 'due west'. But the Ventnor Track Tracing Sheet clearly shows a heading *Southwest* after a rather sharp 80-degree turn at 2103Z.

*ii)* The parliamentary answer states that during this 'westward' departure earlier indications of very high speed over 750 knots (860mph) were revised down to less than 600 knots. But the report by the Ventnor officer commanding states that this target travelled 'in a southwesterly direction at a speed of between 750 and 800 knots [860-920mph]' and includes the radar Track Tracing Sheet in evidence. Moreover the departure leg was the *fastest* leg of the Ventnor track.

*iii)* The parliamentary reply by George Ward on Weds 08 May 1957 states that the Javelin interception was called off when it became clear that the incident was a false alarm. But the Odiham report states that GCI called off the intercept because the departing target was lost off the Type 80 radar - 'mission 48 was told object was now in the dark and that he was to return to base.' The object was beyond the maximum GCI radar range and the Javelin had acquired no AI radar contact. There was simply nothing left to intercept.

Thus the 'official' version is in several respects not strictly accurate when compared against the original sources, and one is entitled to wonder about those statements which we are unable to compare against original sources - including the statement that 'exact' matches were found by comparing Track Tracings with the 'flight plans' of the Hunters, especially when it is elsewhere stated that the matches were obtained not with 'plans' but with 'movements of the Hunters as reported [afterwards] by their pilots'. This may be 'only' a casual confusion of terminology but it doesn't increase one's confidence in the statement.

2.) But it is clearly also *not* true that the interception was called off because the object outpaced the Javelin as was reported in several news stories. Javelin 'Mission 48' was given a first vector to the target when it was at 12 miles range at 12 o'clock, 5000' above him at 50,000'; after having climbed 3000' in pursuit Mission 48 had reduced the range to 10 miles at 12 o'clock. The Javelin was obviously closing *even in a shallow climb*, not falling behind, and was called off only because the target had disappeared from the GCI scope by the time he had climbed to its flight level. The report from Odiham would therefore be consistent, qualitatively speaking, with the relative performances of a Javelin and a Hunter.

3) The Parliamentary answer says that one of the pair of targets headed for Horsham St.Faith, which would fit a Hunter. Horsham St Faith was home to Hunter F4's of 74 Squadron. The maximum *operational* speed of the Hunter F4 was 675 mph (587 kt) according to my information (a stripped-down F3 set a world record of 727.6 mph in 1953). The Javelin flown by 46 Squadron at Odiham was the F(AW) Mk.2 introduced into service there only that June, replacing the Mk.1

which had been flown since Feb 1956. Both marks had top speeds of 710 mph (617 kt)), capable of overhauling a Hunter. But the Ventnor report states that the unknown was plotted travelling 'in a southwesterly direction at a speed of between 750 and 800 knots [860-920mph]' which is far too fast even for a Javelin, and fully 25 - 35% faster than the top speed of a Hunter. This is clearly inconsistent with the Odiham report - *if* both are interpreted as referring to the same leg of the plot.

3.) Some detail of the Odiham report also doesn't sit comfortably with the picture painted by the summary prepared for the Minister. That statement says - underlined for emphasis in the SECRET 'Notes for Minister' - that personnel were suspicious of these targets "since aircraft are not tracked inland [and] the G.C.I. was not aware that the aircraft had, in fact, come from inside the United Kingdom." In other words, it is implied that the objects were picked up over the Channel, and the one pursued continued along the coast "due West", "heading West", "travelling Westwards" as stated repeatedly. This is flatly wrong. Odiham's report states that at 2105Z Mission 48 was 6 miles southeast of Yeovil, on a heading 010 magnetic (i.e. nearly North), with the object at 12 o'clock, range 12 miles. This puts the supposed 'Hunter' somewhere between Somerton and Castle Cary about *20 miles inland* from the Channel coast at 2105. The Ventnor Track Tracing Sheet shows the plot for 2105Z heading *outbound* on a SW heading from an earlier position some 10 nm NE of this point. Ventnor's initial plot would have been in the vicinity of Shaftesbury, 25 miles inland, and heading NW towards S Wales.

4.) The ministerial summary refers clearly and repeatedly to *two* intercepting Javelins, evidently Missions 48 and 49 from Odiham, but only Mission 48's role under control by Hope Cove is detailed in the Odiham report. What happened to Mission 49? Did it go after the other target or was it involved with this one? Notice that the Ventnor Track Tracing Sheet shows this target fading around the Devon coast somewhere near Salcombe, whereas the ministerial summary says that it was 'out to the west of Lands End, moving towards the limit of Hope Cove's radar cover ' when the *two* Javelins were called off, which is at least 100 miles further west of this last plotted position.

5.) "During the phase when the Javelins were being homed onto the suspicious aircraft travelling westwards its speed was re-assessed at something under 600 knots." Under 600 knots (<690 mph) could indeed be consistent with a Hunter going all-out, as already mentioned. But whilst the term "re-assessed" implies that an earlier higher speed measurement was somehow corrected or downgraded to this value by a more accurate plot later, there is no basis for this. The report from Ventnor was prepared on May 1, with the benefit of two days reflection, and sent to Air Ministry with Track Tracing evidence of the target travelling "in a southwesterly direction at a speed of between 750 and 800 knots. The responses were strong and painted continuously for each sweep." No evidence here of Ventnor GCI revising their speed measurement downward for any reason. So all that the Ministerial statement actually says is that at a later time the target slowed down, but the language chosen encourages us to infer that the earlier speed was somehow invalid.

6.) Conclusions on the fast target: This target was apparently detected over land and was lost outbound from the UK, and the Ministerial answer implying otherwise is probably a fib. The claim that aircraft were "not tracked inland" - i.e. not routinely monitored or identified - is true but misleading. Of course, traffic detected inland would not normally be *attended to* since an enemy has to have approached from the sea in first place, but the Type 80 antenna rotated through 360 degrees and continually scanned targets inland. In this case it evidently was not the unusual 'movements' of unexpected traffic over the sea that alerted the defences but the *speed* of targets that were plotted *over land* - something that officials sought to de-emphasise. The Ministerial claim that initial estimates of high speed had been 're-assessed' during the west-bound pursuit actually means that the target *slowed down* at this time to a speed almost allowing interception by the Javelin(s). A carefully-crafted statement hints that the Ventnor plot must somehow have been in error. I don't see

any evidence of or reason for such an error. I think all of this smacks of calculated misinformation. If I had to speculate about the purpose I would say that the ministry weren't at all sure that these targets could definitely be accounted for as Hunters but were strongly motivated to present the case as closed in the face of parliamentary and public excitement, riding on the back of other recent cases such as West Freugh. So they were happy to let certain parts of the official record drop out of sight and to put a favourable gloss on the rest.

7.) As regards the Shanklin radar-visual beginning at 2010 the absence of positive ID on the two 'balloons' and the risk that rumours might get out (apparently nothing did get out) would only serve to sensitize officials to the need to downplay the affair. There isn't much to say about the event itself. The witnesses are described as 'astronomers', presumably amateur, and the description certainly sounds like twilight balloons at altitude drifting slowly in a W or SW direction. In fact the observers said that the object(s) looked balloon-like. A visual height estimate of '60-150 miles' quoted in one place seems anomalous. The estimated height said to have been telephoned to RAF Ventnor was 30,000 ft, which sounds more sensible. (Perhaps '60-150 miles' has been incorrectly transcribed from an original '6-15 miles', in which case the lower figure corresponds to the telephoned visual estimate of 30,000'.) Provided that winds at altitude were light from the N or NE then this would all match fairly well with a pair of slow-moving balloons at the radar-measured height of 25,000', even though the Beachy Head radar reported *no* discernable movement. Unfortunately there is no weather information attached, and although the implication of the official suggestion that the balloons might have drifted from France is that winds were in the prevailing direction from the S/SW rather than the generally E direction indicated by the drift visually reported, this is a weak point. There appears to be nothing concrete to connect these stationary or slow-moving objects to the fast objects tracked shortly afterwards, although it is circumstantially interesting that both cases involved pairs of objects and that the time of final visual disappearance of the earlier pair, around 2115Z, is not far off the time of westerly departure of the high-speed 'Hunter'. But to have seen anything associated with this latter event the witnesses would have to have been looking at low elevation almost due west which doesn't match their statement that they were looking towards 150deg (southeast). It is also not clear that Beachy Head radar had ceased observing the second of the 'balloons' before the 'Hunters' appeared.

8.) In summary, if the intercepted object really did achieve radar-tracked speeds approaching 800 knots then it was not a Hunter, neither was it any operational jet in RAF service at this time. From the requirement that winds were slight or zero up to around 30,000' to account for the 'balloons' near stationarity around the same time, it can also be inferred that there was probably no significant component of tail wind (the general trend of the direction of travel at >40,000 ft was *opposite* to the direction of jet stream winds over the UK). And remember that this recorded ground speed is a minimum since the PPI only shows the lateral component of the target speed minus any vertical component due to climb or dive (Ventnor could not get a Type 13 height reading on the object). If the Ventnor radar report is wrong then the object could have been a Hunter, but evidence that the radar report is wrong is lacking. It is also of interest that according to the Odiham report Mission 48 did not acquire AI radar contact on the object even though its range was four miles inside the pickup range for a fighter proven during PI exercises immediately beforehand. (In different circumstances we might be seeking to argue that this suggested there was *nothing* there!) In short it isn't possible to be confident about what the object(s) may or may not have been.