

## **NORAD Chronology – Washington ARTCC September 11, 2001**

By John Farmer

### **Nomenclature**

Huntress – North American Aerospace Defense Command (NORAD) call sign  
Giant Killer - Fleet Air Control and Surveillance Facility Virginia Capes (FACSFAC VACAPES) call sign  
NEADS - North East Air Defense Sector of NORAD  
Boston – Boston ARTCC (FAA)  
New York – New York ARTCC (FAA)  
Washington – Washington ARTCC (FAA)  
TRACON – Refers to a specific airport approach ATC (FAA)  
MCC OP - DRM1 DAT2 Channel 2 MCC OP.wav  
ID OP - DRM1 DAT2 Channel 4 ID OP.wav  
ID2 OP - DRM1 DAT2 Channel 7 ID2 OP.wav  
AST OP - DRM1 DAT2 Channel 15 AST OP.wav  
SD2 OP - DRM1 DAT2 Channel 19 SD2 OP.wav

### **Background**

On September 11, 2001 a number of military exercises were being conducted by NORAD across the Continental United States and Canada. This resulted in the NEADS facility being fully staffed and avoided any delays in responding to the events of that date. At 12:37:52 UTC, NEADS is notified by Boston ARTCC of the hijacking of American Airlines Flight 11 and was immediately determined to be a real-world event and not part of an exercise. From review of the NORAD audio tapes, there is no hint that the exercises significantly impeded the NEADS response, but rather added to their capability.

Due to post-Cold War cutbacks, NEADS had only four interceptor aircraft on stand-by, two at Otis Air National Guard Base (ANGB) in Massachusetts, and two at Langley Air Force Base (AFB), Virginia. Their main mission was to defend the Air Defense Identification Zone (ADIZ) which in the case of the East Coast consisted of an area over the Atlantic Ocean. The standard operating procedure (SOP) for pilots and military air traffic controllers (ATC) would be to deploy aircraft to intercept violations of the ADIZ.

The military radar system (84 RADES) used by NEADS is set up to support their primary mission of defending the ADIZ. The Federal Aviation Administration (FAA) is responsible for controlling the Continental United States airspace and performs the challenge to aircraft violating the ADIZ and restricted airspace. During a hijack situation, the FAA contacts NORAD for military support and remains in control of the situation in United States airspace. In the case of American Airlines Flight 77 (AAL77) and the

Pentagon, the airspace was under the control of the FAA, specifically the Washington ARTCC. The FAA was literally the eyes and ears for NEADS in this particular case.

After the second attack, NEADS is in the process of getting as many surveillance people watching the 84 RADES radar for primary targets as possible, using every available monitor (AST OP). Screen shots of the 84 RADES radar returns are inserted into this chronology for the respective NORAD audio tape events. NEADS is transforming itself rapidly from the hijack support mission to a national defense mission. They are also busy getting airborne fuel tankers deployed to support the interceptors and getting more aircraft and pilots on stand-by.

**Timeline (NEADS time, UTC)**

**13:08:37**

MCC (Major Nasypany) orders Langley to battle stations. Debate going on with New York ARTCC who wanted to keep the Otis fighters in W-105 area (over water) and MCC wanted them over Manhattan. Langley brought up in case the fighters were needed to back-up the Otis fighters. **MCC OP**

**13:09:33**

In background, QUIT 2-5 and 2-6 "*on battle stations*". **MCC OP**

**13:20:56**

Boston Military (Scoggins) calls ID2 to inform them of a report that AAL11 is still airborne and headed towards Washington. Further that it is hijacked and is a 3<sup>rd</sup> aircraft. Scoggins advises that it is a report from Washington Center. **ID2 OP**



**13:21:34**

MCC alerted of 3<sup>rd</sup> hijacking headed towards Washington. **MCC OP**



**13:22:32**

MCC gives the order to scramble Langley and head them towards the Washington area.  
**MCC OP**

**13:22:33**

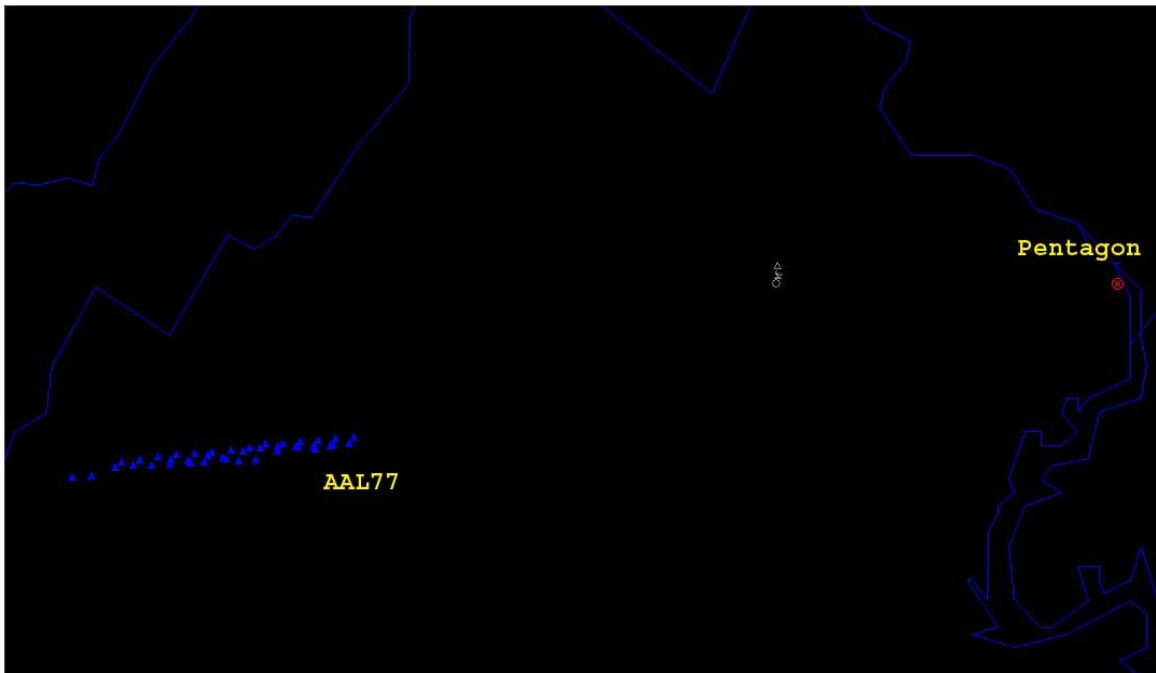
Reports a 3<sup>rd</sup> (American Airlines) aircraft headed towards Washington. **SD2 OP**

**13:23:08**

Reports Langley fighters are being scrambled to the Washington area. **SD2 OP**

**13:23:10**

ID2 called Washington Center to get more details. The male answering the phone said he had only been there for around 10 minutes and had no information regarding AAL11 headed towards Washington. **ID2 OP**

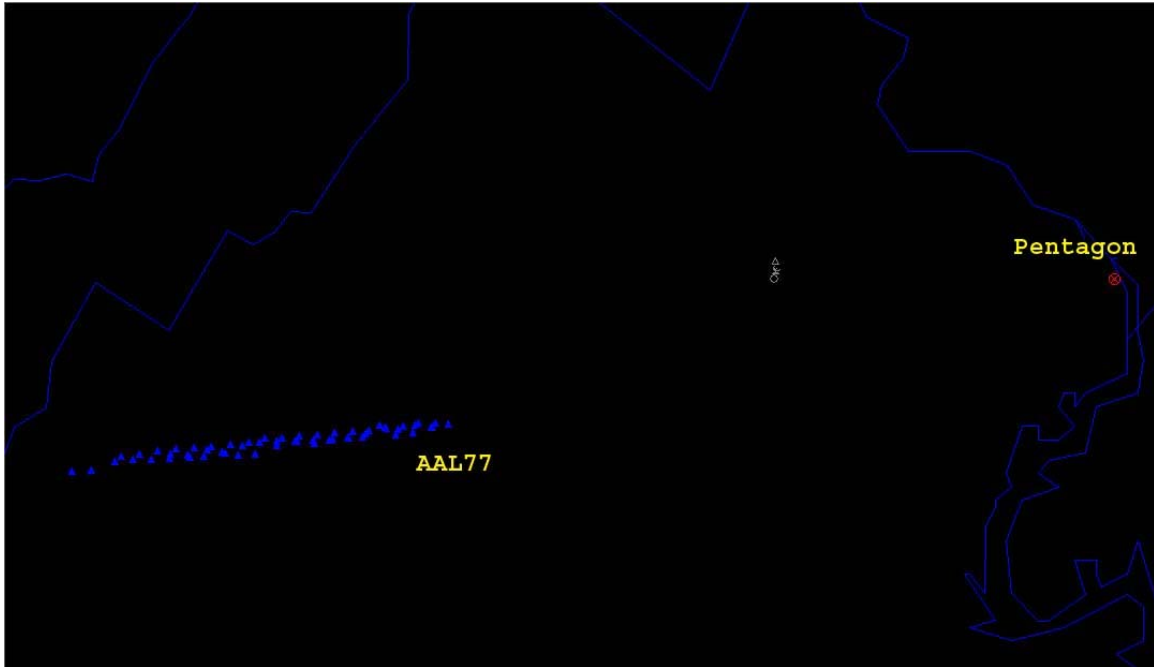


**13:23:47**

“You’ll have to maintain com with FAA and victor (unintelligible)...”  
“Your mission will be to bring him up north, for now just head him toward (spoken over)...international...tell them to coordinate with Center that NORAD wants them to cam... (spoken over)”  
“Baltimore-Washington International...” **SD2 OP**

**13:24:02**

Scoggins, Boston Military calls ID2. “We did hear from Washington, there is an aircraft, they believe it is American 11 and he is southwest, only just don’t have a point...” **ID2 OP**



**13:24:08**

MCC states Langley fighter call signs as QUIT 2-5 and QUIT 2-6. **MCC OP**

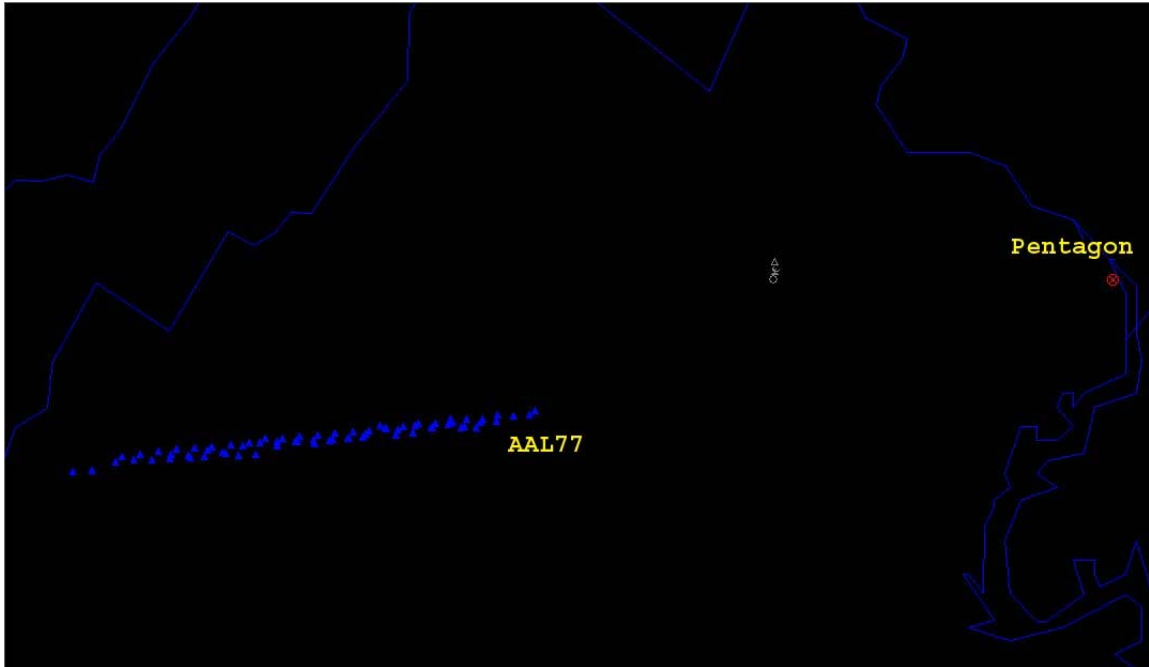
**13:24:54**

“...cap over Washington...”

“...we’ll be ready to go...” **SD2 OP**

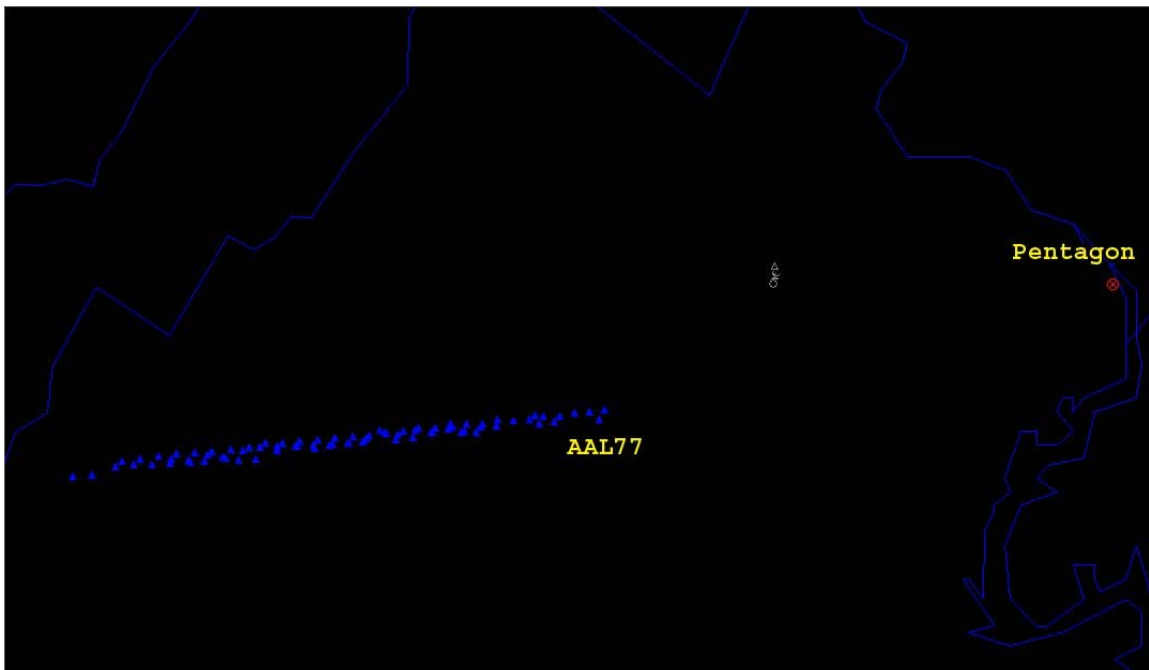
**13:25:11**

ID calls Washington Center to see if they have information regarding AAL11 which is thought to still be in the air and headed towards Washington from the New York area. Washington says “we don’t have anything on that one.” When asked if they were aware of the report he was headed for Washington he replied, “We just got word from Boston or somewhere, but we don’t have anything on him yet and ... uh ... there’s a lot of different things going on right now.” **ID OP**



**13:26:31**

ID yells out, "Boston is now missing another aircraft!" **ID OP**

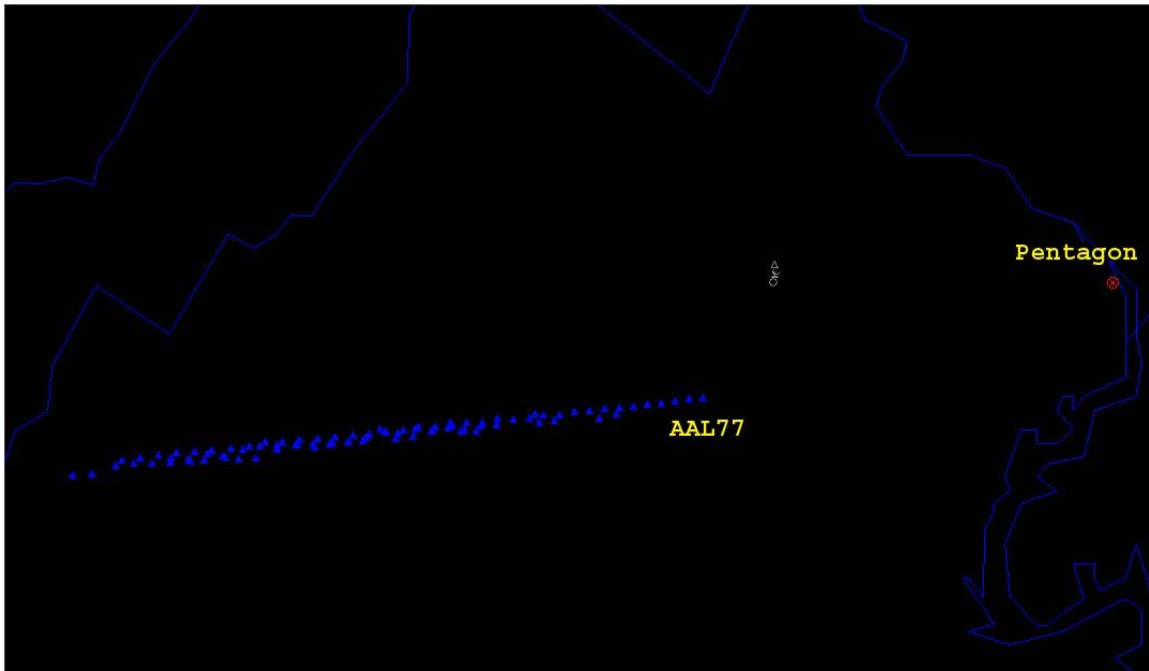


**13:27:21**

ID2 calls Washington requesting lat/long for AAL11 "headed towards ya'll". The phone is handed off to another male who asks, "where you getting this information from on

American 11?" She responds, "Boston Military", and that they were getting it through Washington. Washington Center responds that AAL11 is the plane that crashed into the World Trade Center and Boston is not getting their information from Washington Center.

Washington Center advised they would have their military guy call the Boston military guy. The man on the phone tells someone in the background to call Boston Military and then hangs up. **ID OP**



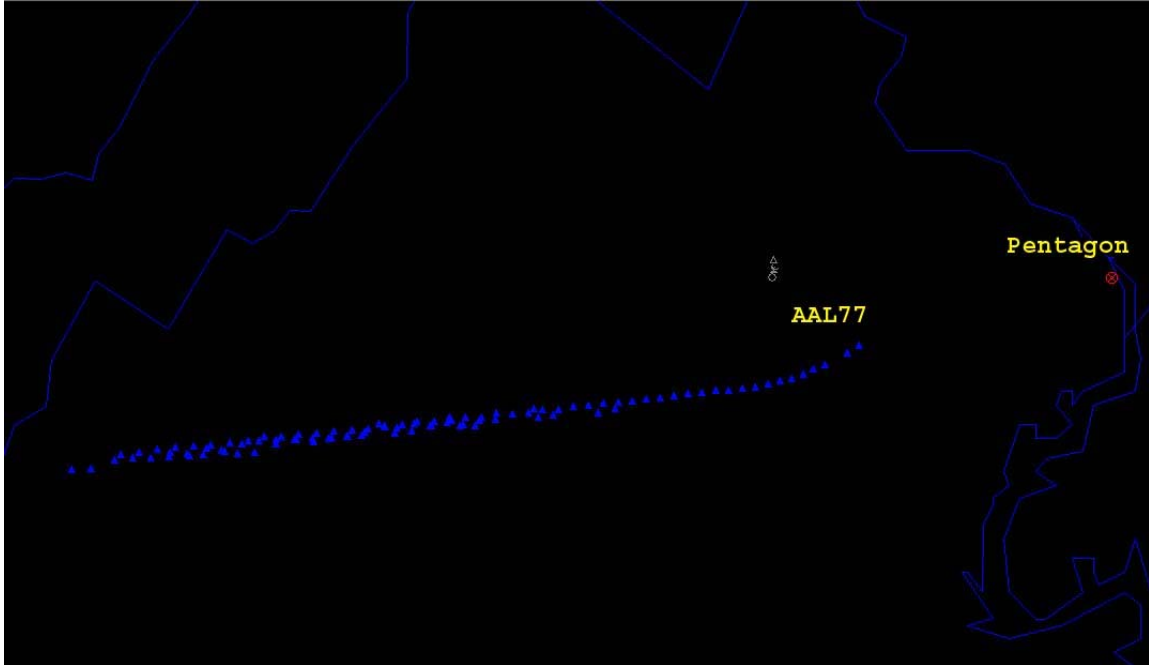
**13:29:30**

A female voice in the background says, "Washington had better get on the loop!" **ID OP**

**13:29:40**

Same female in background says, "...they better start looking for this guy..." **ID OP**

In general ID begins complaining to Boston on the phone about the lack of information coming out of Washington Center and being non-responsive, requesting that Boston call Washington. **ID OP**



**13:30:25**

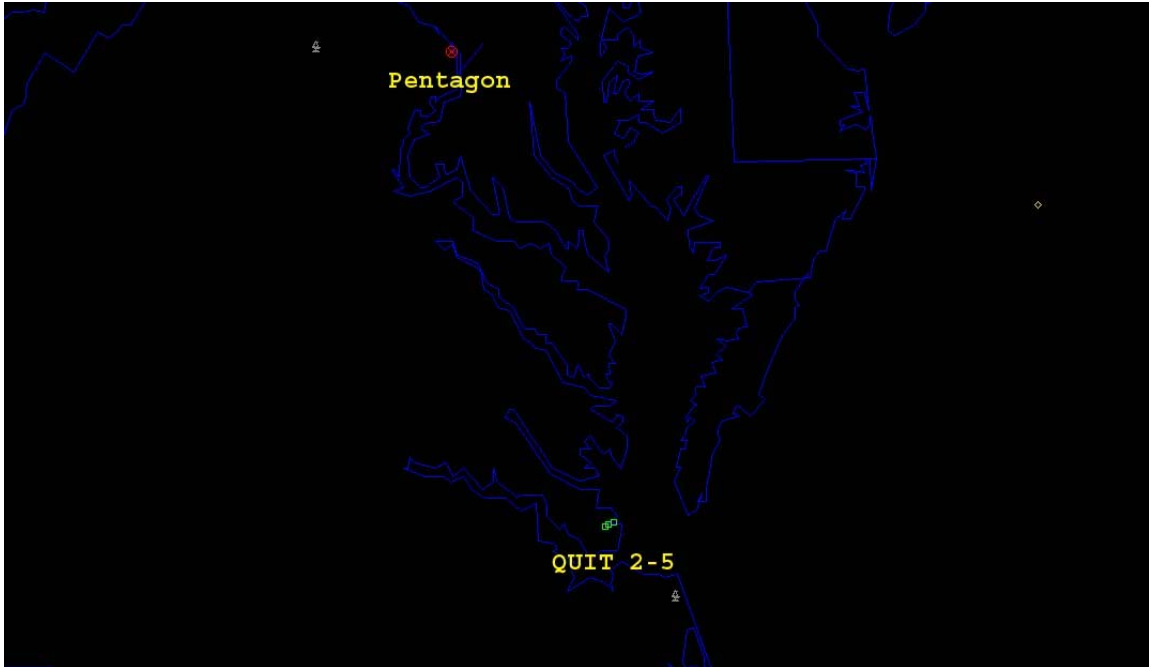
Male voice in background says, “Langley is scrambled.” The male seems to indicate the Langley fighters are headed to a point over Washington, DC, but conversation is broken.  
**ID OP**

**13:30:33**

“QUIT call sign airborne...” **MCC OP**

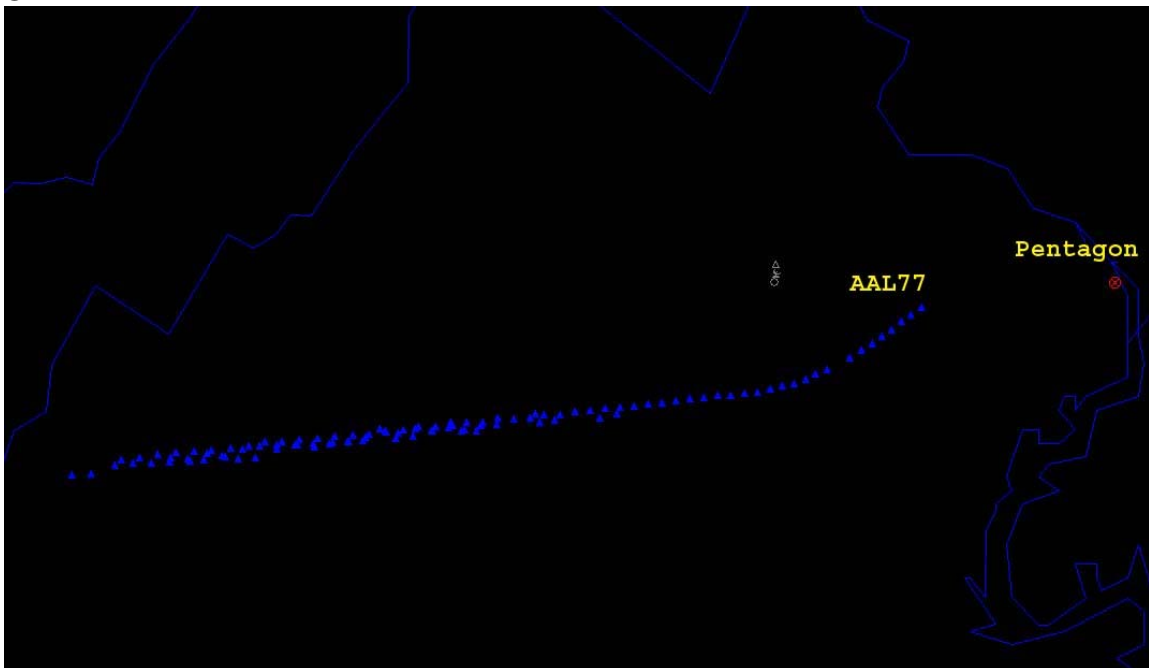
Verified by 84 RADES radar data that Langley fighters are in the air at this point.





13:31:25

ID contacts Boston Military and asks if they have any updates on the hijacked aircraft. They do not know where AAL11 is and have no information on the 3<sup>rd</sup> missing plane. **ID OP**



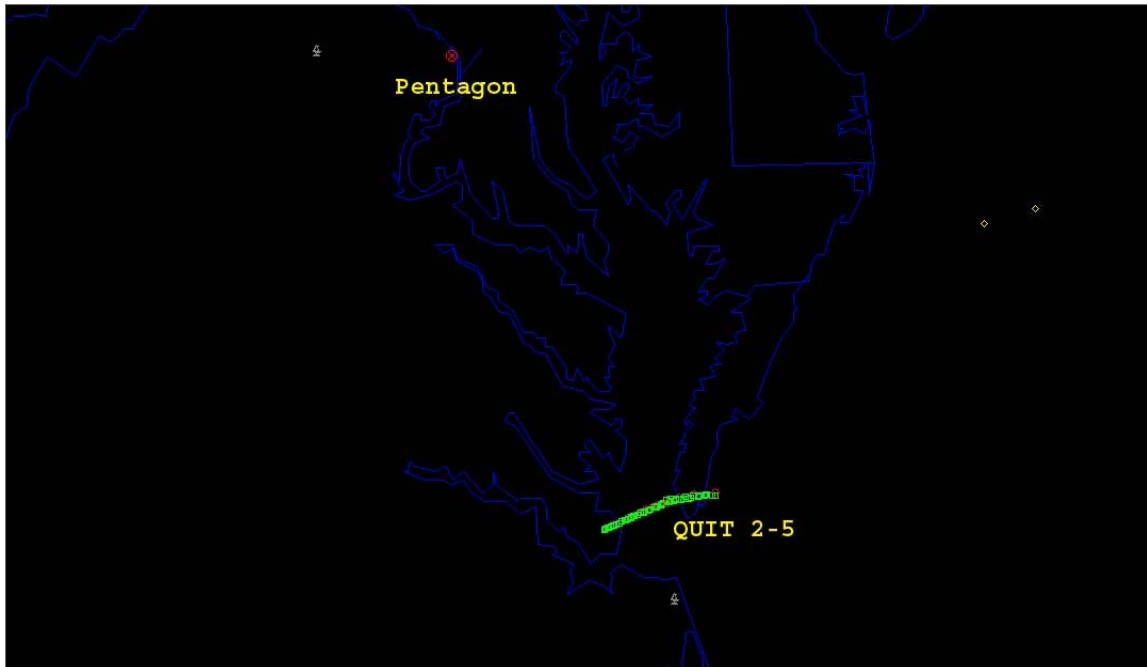
**13:32:17**

Washington Center Operations Manager calls ID. ID briefs him on what NORAD knows at that point, 3 missing aircraft and that one may be headed towards Washington. **ID OP**

**13:32:40**

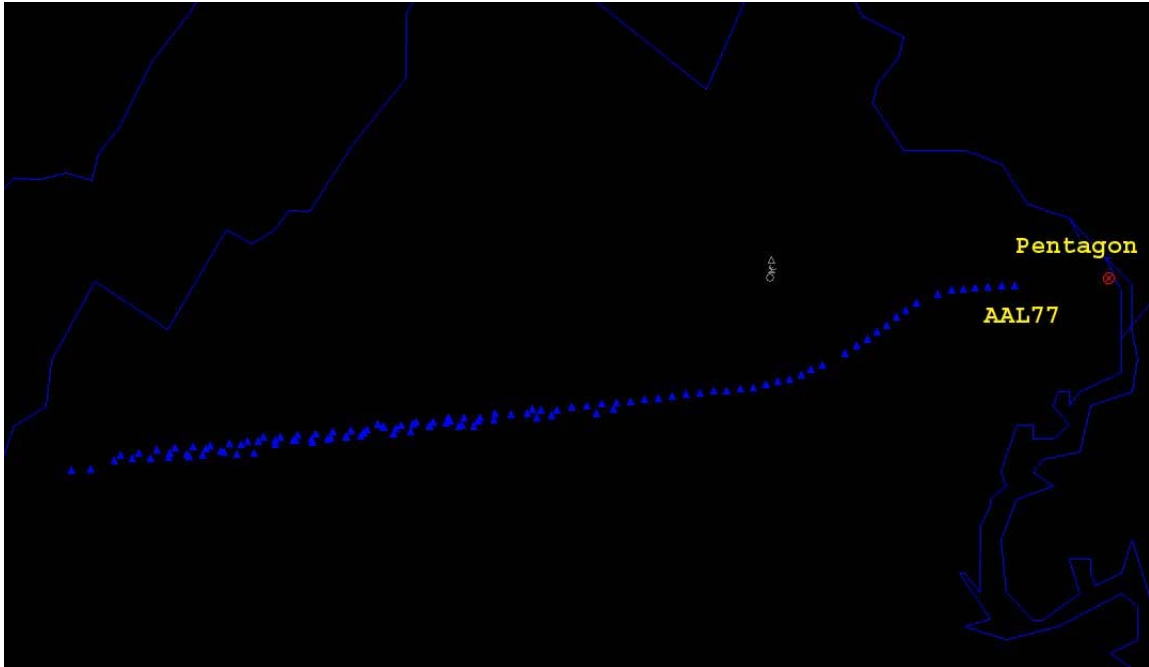
QUIT 2-5 headed into W-386, "I have no idea why..."\* **MCC OP**

*\* Langley TRACON should have handed the fighters off to Washington ARTCC (Washington Center) so that they could proceed to the DC area. Instead, they were handed off to Giant Killer who followed their SOP and sent them to an offshore holding area (W-386) where a tanker (TEAM 2-2) had been dispatched to a few minutes earlier.*



**13:33:10**

SGT Richmond notified that ID was working to identify 3<sup>rd</sup> hijacked aircraft (later ID as AAL77). **AST OP**



**13:33:22**

Time Langley fighters airborne given as 13:25. **SD2 OP**

**13:33:29**

SGT Richmond alerts radar operators #6 and #8 to watch for search targets and alert him if they see anything. **AST OP**

**13:33:58**

After the briefing by ID, the WCOM tells ID about AAL77 missing. Female voice in background starts yelling out “American Airlines 77 is lost”. He tells her that Indianapolis lost contact with AAL77 at 35,000 feet and don’t know where he is, “so what we have done at the surrounding centers here is tell everyone to look out for limited codes, primary targets, or whatever the case may be. And that was the last time, that was about fifteen minutes ago since I talked to the Indianapolis Center Operations Manager.” He had no further information except that Indianapolis put its last location “east of York”. **ID OP**

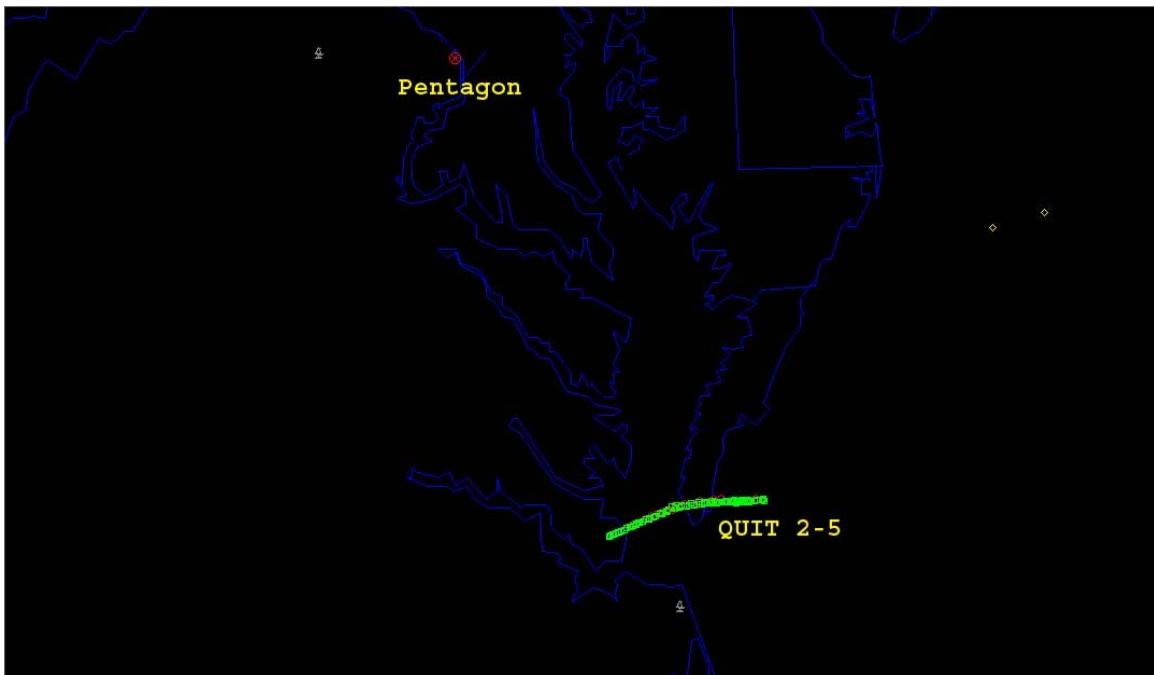
**13:34:06**

First identification of AAL77 heard as a hijacked aircraft (error in take-off location, Boston to LAX). **AST OP**

**13:34:08**

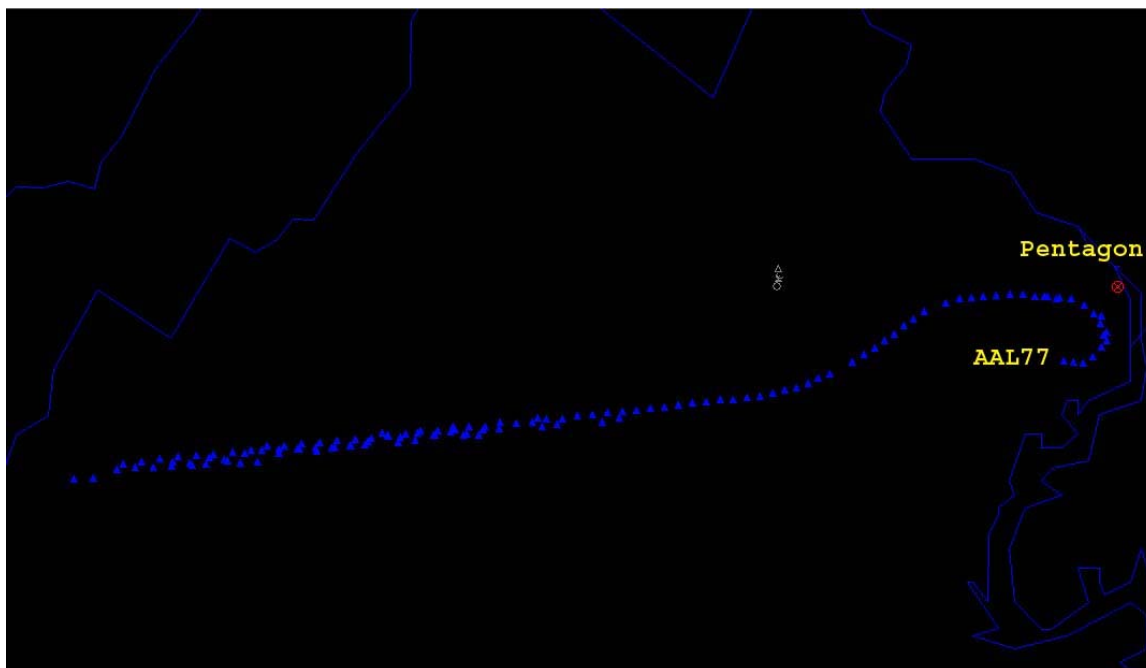
MCC on the phone with Giant Killer, Fleet Air Control and Surveillance Facility Virginia Capes (FACSFAC VACAPES) in regards to QUIT 2-5 (Langley fighters). Asks Giant Killer to work with Center and send them direct to Baltimore-Washington International and contact Huntress (NORAD) on the radio. Giant Killer responds, “**you got QUIT 2-5 moving east in the airspace and now you want me to go to Baltimore?**” MCC responds yes and says just to tell Center they need to go to Baltimore.\* **MCC OP**

*\* This turn to the north is not executed until 13:38:10 (approximately same time as AAL77 impacts the Pentagon). It is unclear why the delay in executing the turn north even after clarification.*



**13:35:35**

Boston calls ID2 reporting a VFR aircraft six miles southwest of the White House and moving away. They had overheard the report on a telecom and wanted to make sure that NORAD got the information. **ID2 OP**

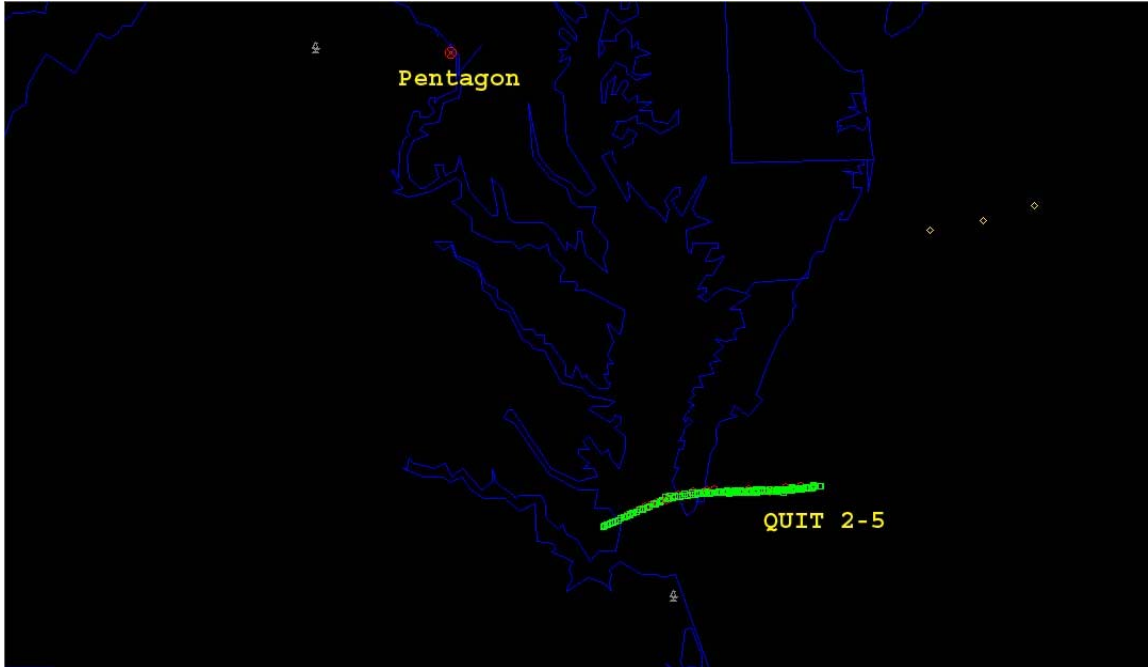


**13:36:10**

Female in background heard saying, “We have an aircraft six miles west of ...”  
(interrupted). **ID OP**

**13:36:11**

MCC reiterates that QUIT 2-5 will be under Center control but to send them to Baltimore  
and stating that NORAD just needs to be able to talk to them. **MCC OP**



**13:36:12**

ID calls Indianapolis Center. No real information given except last position and altitude (35,000 feet, 38 41 N, 082 52 W, 12:56 Z, Heading 270, speed unk). Indianapolis did not give NORAD the position information until **13:39**, AFTER the estimated impact time of AAL77 with the Pentagon. **ID OP**

**13:36:13**

First indication of search target in Washington area heard. **AST OP**

**13:36:15**

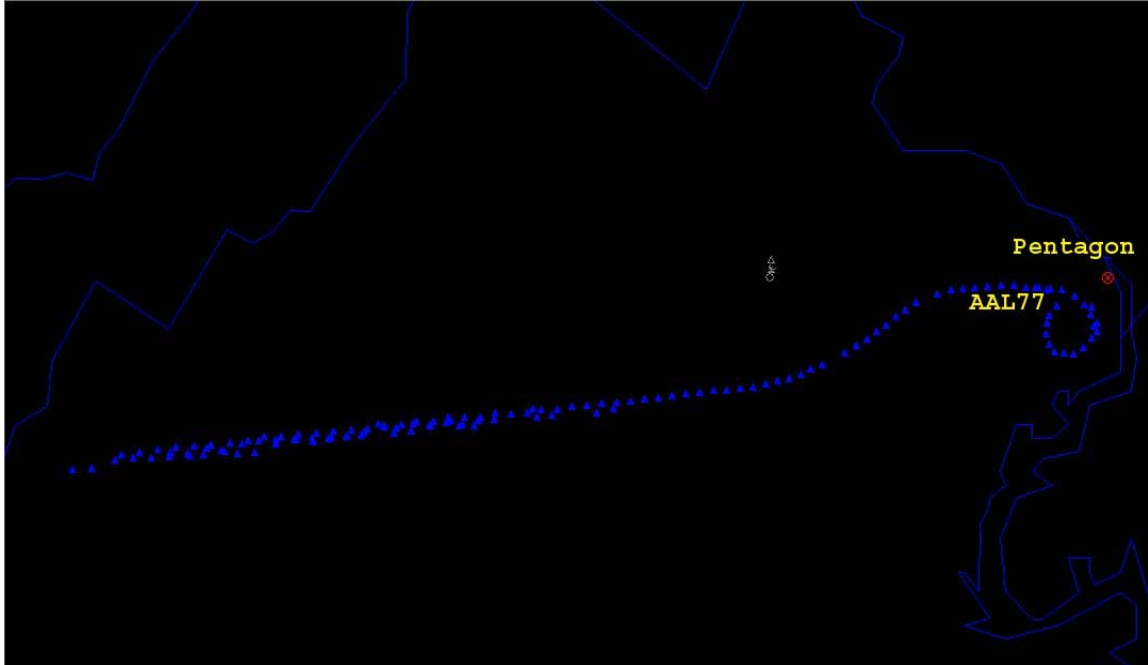
Female in background, "...six miles east of the White House..." **ID OP**

**13:36:20**

Operator heard in background saying, "9 miles south of Baltimore – Washington International". **AST OP**

**13:36:45**

Operator heard in background saying "...to the White House". **AST OP**



**13:36:57**

“Bravo zero-three-two, right next to the NCA, search only.” **AST OP**

**13:36:59**

Female in background, “...six miles east losing altitude...” **ID OP**

**13:37:11**

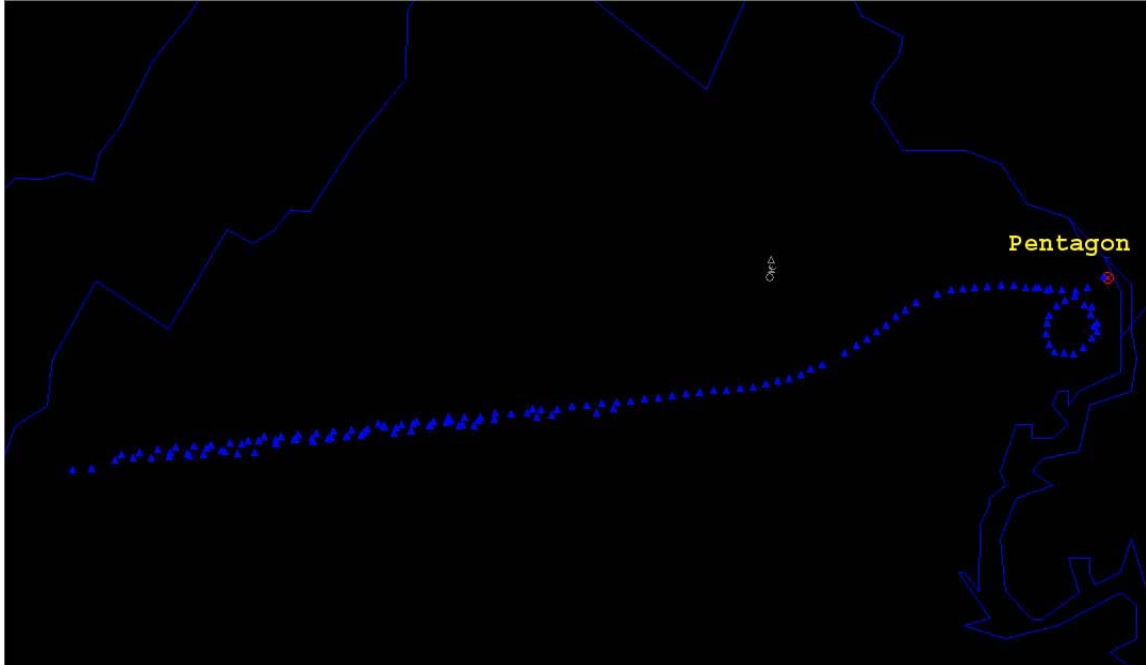
NEADS takes direct control of QUIT 2-5 and 2-6 away from Giant Killer. Advises they are going direct to Washington with after-burners. Giant Killer advises they are handing them off to Center at that time. **MCC OP**

**13:37:17**

“...turning into NCA...” **AST OP**

**13:37:51**

“...he’s fading...” **AST OP**



**13:38:18**

“The guy has faded...” **AST OP**

**13:38:32**

ID2 calls Washington and asks for more information on the Boston report. ID2 specifically is asking about the plane 6 miles southwest of the White House. “Well Boston’s airspace does not even come close to that and I don’t know how they got their information but we don’t ...” is the response from Washington Center. After going silent for a few moments, he responds, “we don’t know anything about that ... it is probably just a rumor.” He suggested that NORAD call National or Andrews. **ID2 OP**

**13:41:21**

Boston Military (Scoggins) calls with a report that a plane just hit the Pentagon. **ID2 OP**

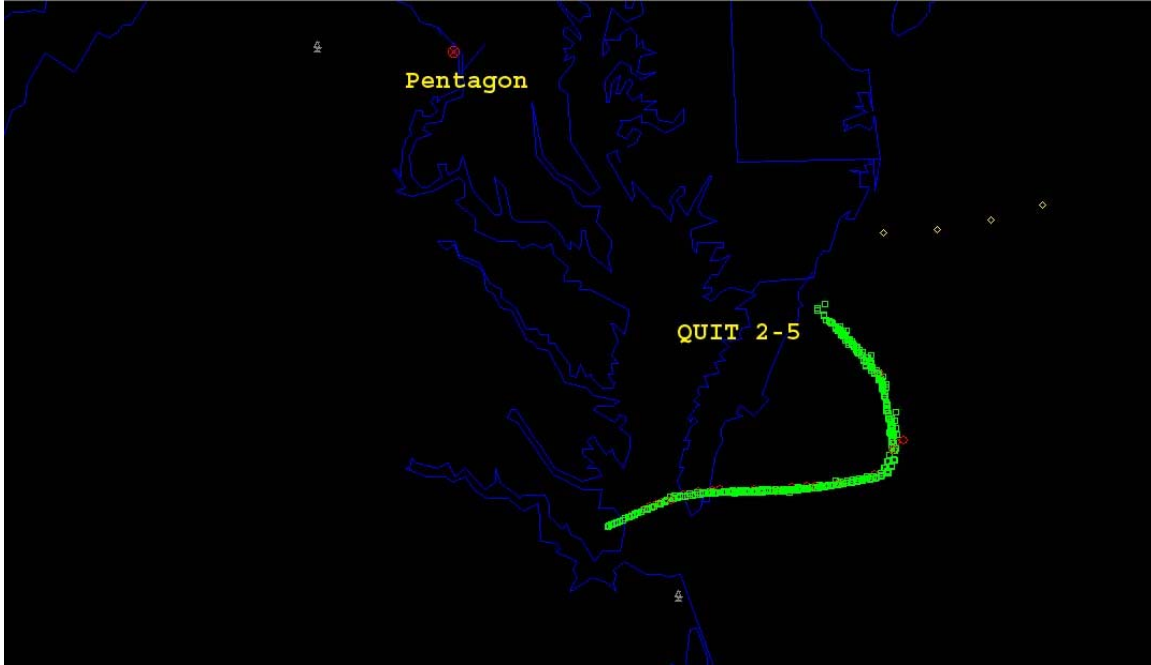
**13:41:52**

“They are headed there now...freaking Giant Killer in their wisdom sent them out over the water, when we scrambled them to Washington.” **SD2 OP**

**13:43:24**

“Giant killer...we scrambled them out to Washington. Langley, Giant Killer sent them out over the water.” **SD2 OP**

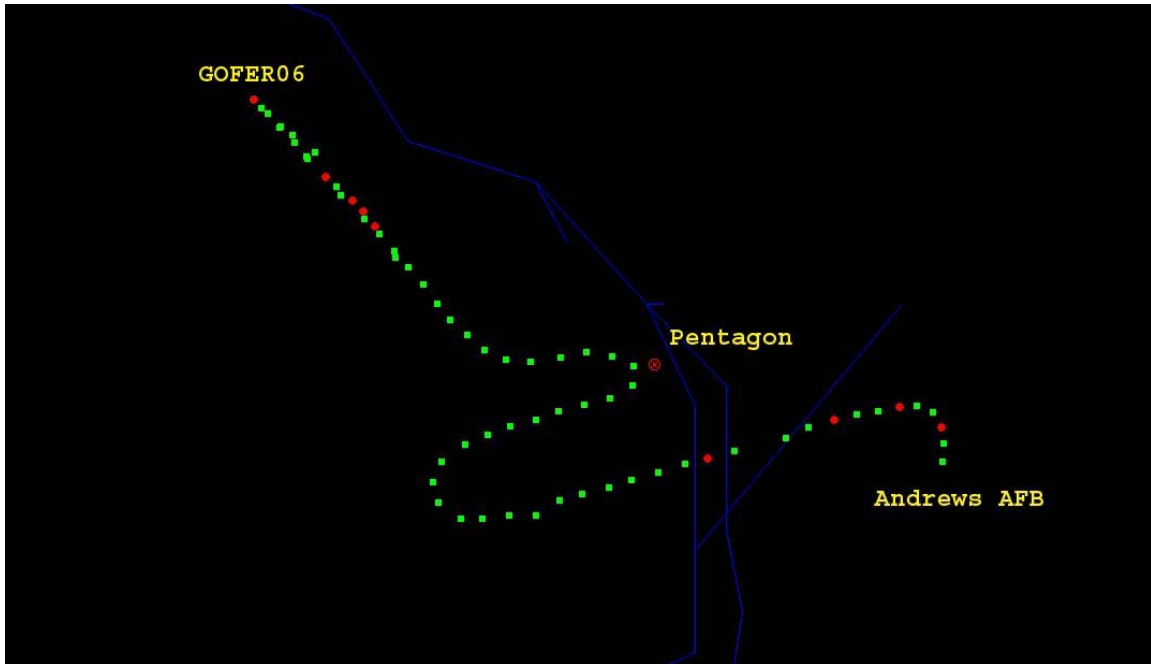




**13:43:37**

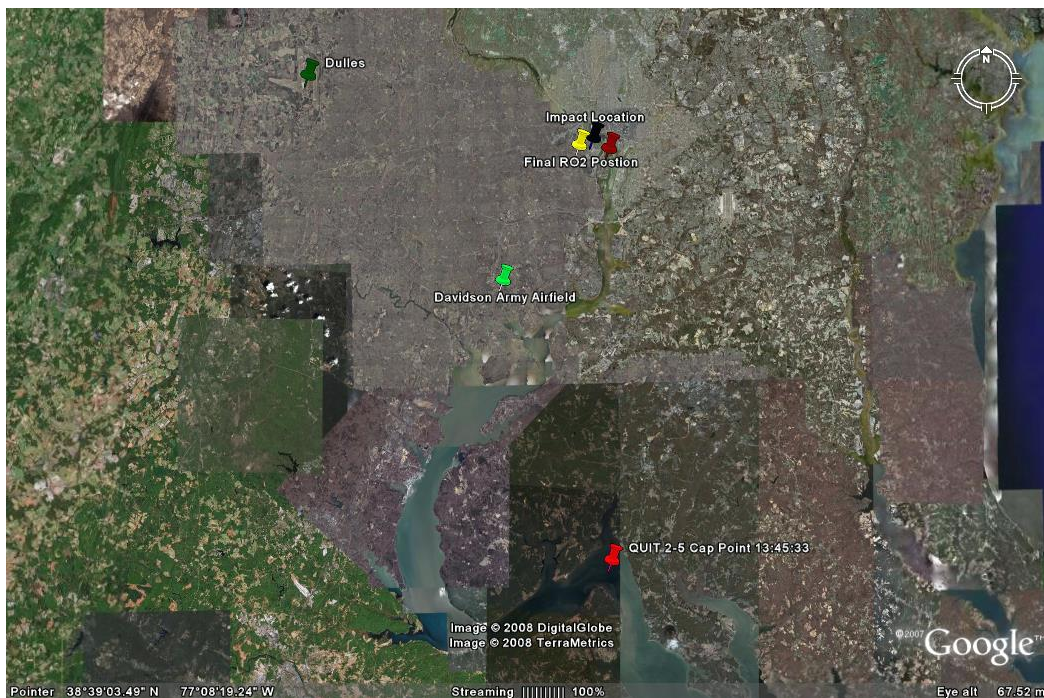
Report of another aircraft sighted near the Pentagon.\* **MCC OP**

*\* Most likely GOFER06, a Minneapolis, MN Air Guard C-130 that had just departed Andrews AFB. Andrews TRACON diverted GOPHER 6 to investigate the plane approaching the DC area. After the impact of AAL77, GOPHER 6 turned back to avoid the smoke column and resumed its flight path. The sight of GOFER06 near the Pentagon alarmed many on the ground, not knowing if it was another attack or not.*



13:45:33

QUIT 2-5 sent to CAP point, 38 25 N, 077 02 W. MCC OP



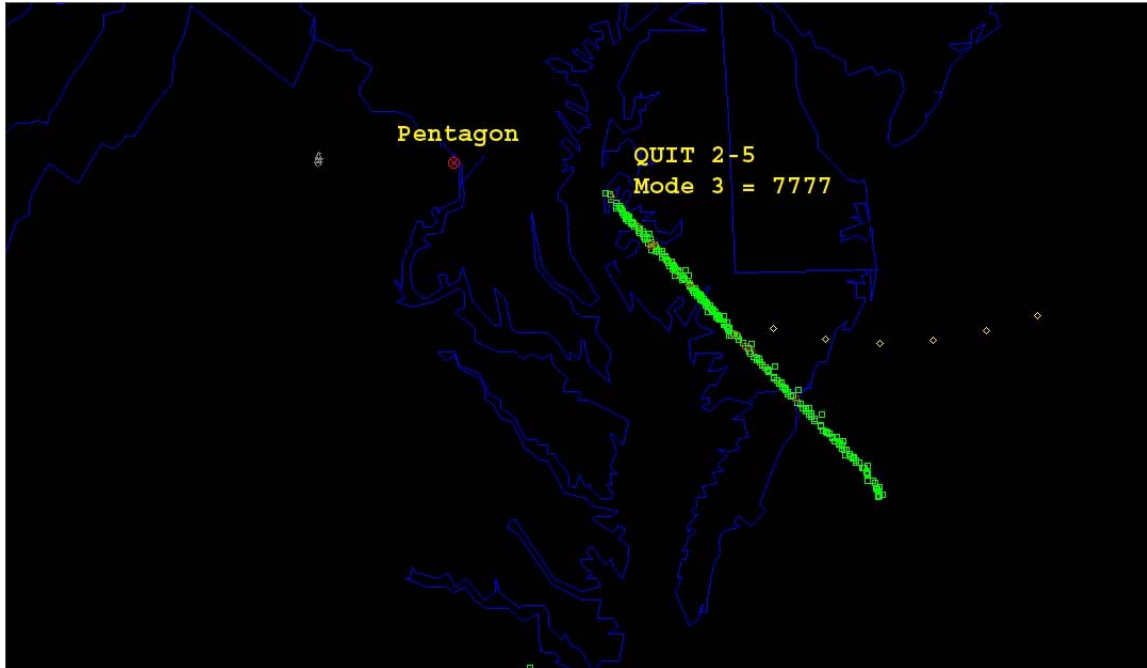
13:49:03

MCC notified that the Pentagon had been hit. MCC OP

**13:49:26**

Washington Center calls ID frantically asking about a plane heading into the DC area squawking 7777 (Mode 3), "...I need to know if anyone knows anything about that aircraft." These are the QUIT interceptors from Langley.\* **ID OP**

*\* This is particularly odd since they felt no need to call NEADS when they were tracking a primary target only plane of the same modus operandi as the planes that hit the WTC towers minutes earlier.*

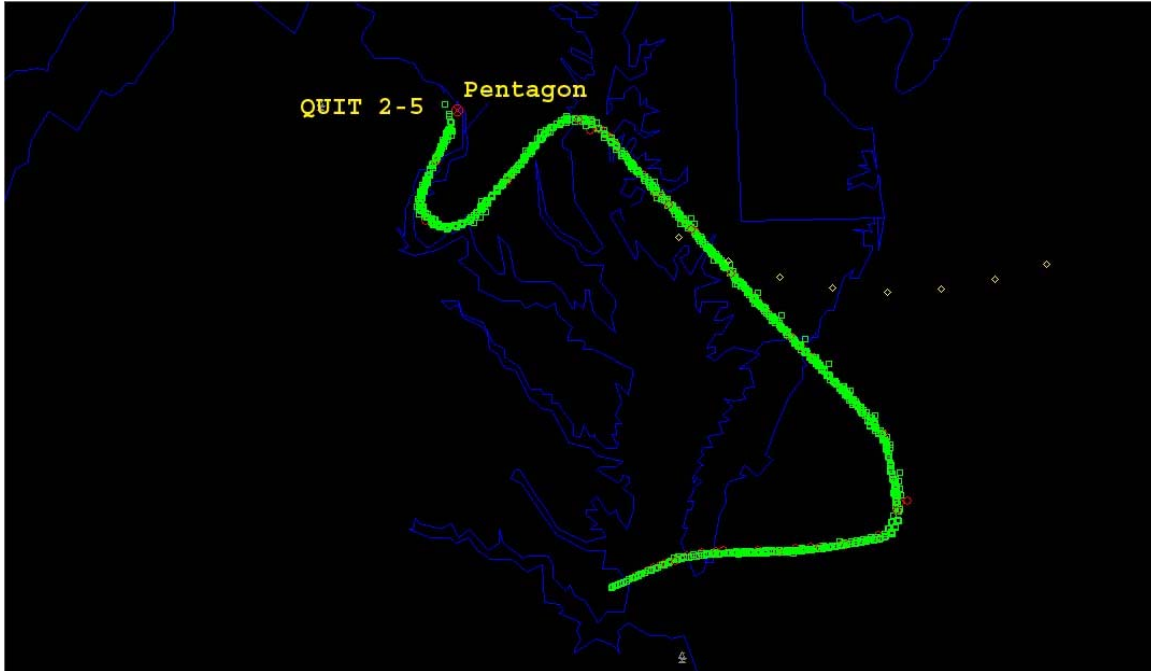


**13:55:23**

“Okay, Cleveland’s line is still busy, Boston is the only one passing us information, Washington doesn’t know shit!” **ID2 OP**

**13:58:34**

QUIT 2-5 and 2-6 over the Pentagon. **84 RADES**



## Conclusions

Boston Military (Scoggins) is the only source of information that NEADS has for the approach of AAL77. He is making it a point to pass on information that he is overhearing in the Boston ARTCC. His initial report (13:20:56) of an aircraft headed towards Washington is second-hand information and mistakes the identification as AAL11. This may have caused momentary confusion but none-the-less established that a 3<sup>rd</sup> hijacked aircraft was headed towards the DC area. The only significant problem this caused for the MCC is that he scrambled the Langley fighters to Baltimore-Washington International (north of DC) in anticipation of an approach from the north.

At 13:24:02 Boston Military calls back and gives the position of the approaching aircraft as “*southwest*” of Washington, but has no specific coordinates for it. This is exactly what the 84 RADES radar shows at that time. This confirms that Washington ARTCC was tracking AAL77’s primary return although Scoggins was still under the impression that it was being identified as AAL11. For reasons unknown, the Washington ARTCC was NOT sharing this information with NEADS after multiple phone calls by them to get more information. This includes a call (13:33:58) with the Washington ARTCC Operations Manager who does identify the 3<sup>rd</sup> missing plane as AAL77, but makes no mention of the primary track headed straight for the Washington, DC area. After AAL77 impacts the Pentagon, the Washington ARTCC is still (13:38:32) denying that they are tracking anything headed towards the Washington area and calls it a “*rumor.*”

It is well documented in media accounts that the Dulles TRACON was watching the final approach of AAL77. Further, GOPHER 6 (the infamous C-130) was diverted by the Andrews TRACON to intercept and identify the approaching plane. It has been argued that these were the first indications that the Washington ARTCC had of the plane.

However, Boston Military indicates they were watching it very early on when it was southwest of the area and recognized it as a threat. This minor detail, if Washington ARTCC had been forthcoming with NEADS would have resulted in the MCC scrambling Langley to intercept a plane coming from the west, not the north.

The next significant issue is why the Langley fighters were handed off by the Langley TRACON to Giant Killer instead of the Washington ARTCC. Giant Killer followed the SOP for airspace under its control and sent the fighters out over the Atlantic. NEADS was very specific in where to send the fighters which would have required a hand off to the Washington ARTCC, and it is not clear at this point why that did not happen. Once the error has been noted and corrected by NEADS, it is at least three minutes before the planes are turned to the north and then only after NEADS takes direct control from Giant Killer. At 13:49:26 Washington ARTCC calls NEADS wanting to know what the planes are entering their airspace (squawking 7777). So undoubtedly, something has gone very wrong with the handoff by Giant Killer to Washington ARTCC. What many have not understood (including myself until recently) is that the Andrews and Langley TRACON's are all under the Washington ARTCC control.

In the quest to learn what went wrong, what went right is often overlooked. From the NORAD tapes and 84 RADES radar data, it is clear that what went right was NEADS. They responded professionally and rapidly to a very unique and dangerous situation with minimal resources and information. For some reason, Washington ARTCC did not keep NEADS in the loop on what it knew about the approach of AAL77 and the Langley TRACON mishandled the scramble of the Langley fighters, both of which are civilian components of the FAA. Why this happened is an avenue ripe for further research.