

NARCAP TR-16, 2015

Glider Pilot and Passenger Close Encounter with  
Non-Aerodynamic Object at 1530 Hrs. Eastern Time  
on August 9, 2015 SW of Albany, New York

Richard F. Haines  
Chief Scientist

National Aviation Reporting Center on Anomalous Phenomena

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The pilot (R.P.) and his passenger (P.C.) took off from Freehold Airport (1-i5) (42deg 21min 51.82sec N; 74deg 04min 0.40sec W; elevation 440 ft. above mean sea level (MSL) in east-central New York at 1500 hrs. (Eastern) and flew for 46 minutes total. At approximately 1540 hrs. their two-place, dual-control, Grob model 103 (German) glider (**Figure 1**) was heading north at about 3,500 feet above ground level (AGL) and twenty five miles SSW of Albany, New York. They were flying in clear, sunny, and calm weather (**Figure 2**) with a broken cumulus clouds overhead, their flat bases at between 4,500 to 4,700 feet AGL.

The ground below them was mostly low, gently rolling, wooded hills rising from 1,400 to 1,800 feet MSL. The altitude of the fields and farmlands in the area was between 700 to 900 feet MSL. Higher hills ranging from 1,400 to 3,500 feet in height were about four miles farther south of the area where this encounter occurred. **Figure 3** is a computer derived image of Windham High Peak, (marked in **Figure 4**) as seen from ground level from the north. It is 3,523 feet high.

To help establish a stable reference line for plotting various data *Google-Earth* was used to locate two objective points (Windham High Peak and the Smith-Klein pharmaceutical plant 4.99

miles to the north). **(Figure 4)** The pilot said that the UAP was first sighted when the glider was traveling to the north along this approximate line and about three-fourths of the distance to the pharmaceutical plant or 3.7 miles from the mountain. He thought they were traveling at about fifty knots air speed in a slight descent (200 ft./min) at the time. The 25 year-old passenger (this was his first glider ride) was in the rear seat. **Figure 5** shows the flight controls in front of him.

The passenger claimed that he saw the unidentified aerial phenomenon (UAP) first and commented about it to the pilot. Then the pilot also saw it. The object was seen initially in the 1:00 o'clock low (relative) position as it "flew smoothly" passed his airplane (now approx. at 42deg 21min 58.65sec N; 74deg 07min 43.37sec W). **Figure 6** depicts the straight flight path of the glider on the line linked to the *Initial Contact* point with a divergent line drawn at about the 1:00 o'clock orientation with two points indicated. The passenger said that he estimated the vertical angle down to the UAP was about 35 degrees arc. With the glider at 3,500 feet AGL and with wings level this places the horizontal distance to the UAP from the glider at 0.946 mile. If the UAP was flying say 200 feet above local ground level this distance would be slightly less. Likewise, the pilot said this angle was between 50 and 60 degrees arc downward which would place the horizontal distance from the glider at only 0.454 mile or slightly less. In plotting the *Pilot's loc* point and the *Passenger's loc* point in **Figure 6** I used the above horizontal distances.

Both witnesses turned and watched the object pass by them on their right side below their altitude and traveling in the direction of Windham High Peak. It seemed to gain altitude as the terrain rose. The pilot estimated its speed at about 140 mph. and was from 1,900 to 2,500 feet lower than their altitude. The linear distance flown by the UAP starting at a point half-way between the *Pilot's loc* and *Passenger's loc* in **Figure 6** and ending near Windham High Peak was 3.7 miles. It flew about 100 to 200 feet above the tree tops. The ground undulated in altitude over this distance.

The object caught their attention due to intermittent (irregular) bright flashes of light (with spectral qualities "like a rainbow" or sunlight refracted by a glass prism) that seemed to come from its upper surface. At first the passenger thought he was seeing sunlight reflected from the roof of a car traveling on a roadway below. But there was no roadway there. Soon after sighting

the strange object the pilot radioed (Channel 122.85) to the other sailplanes he knew that were in the area to alert them. No one else reported seeing the object.

In order to understand what happened next we refer to a drawing made by the pilot showing the approximate flight paths of the glider (black line) and UAP (red line) in **Figure 7**.

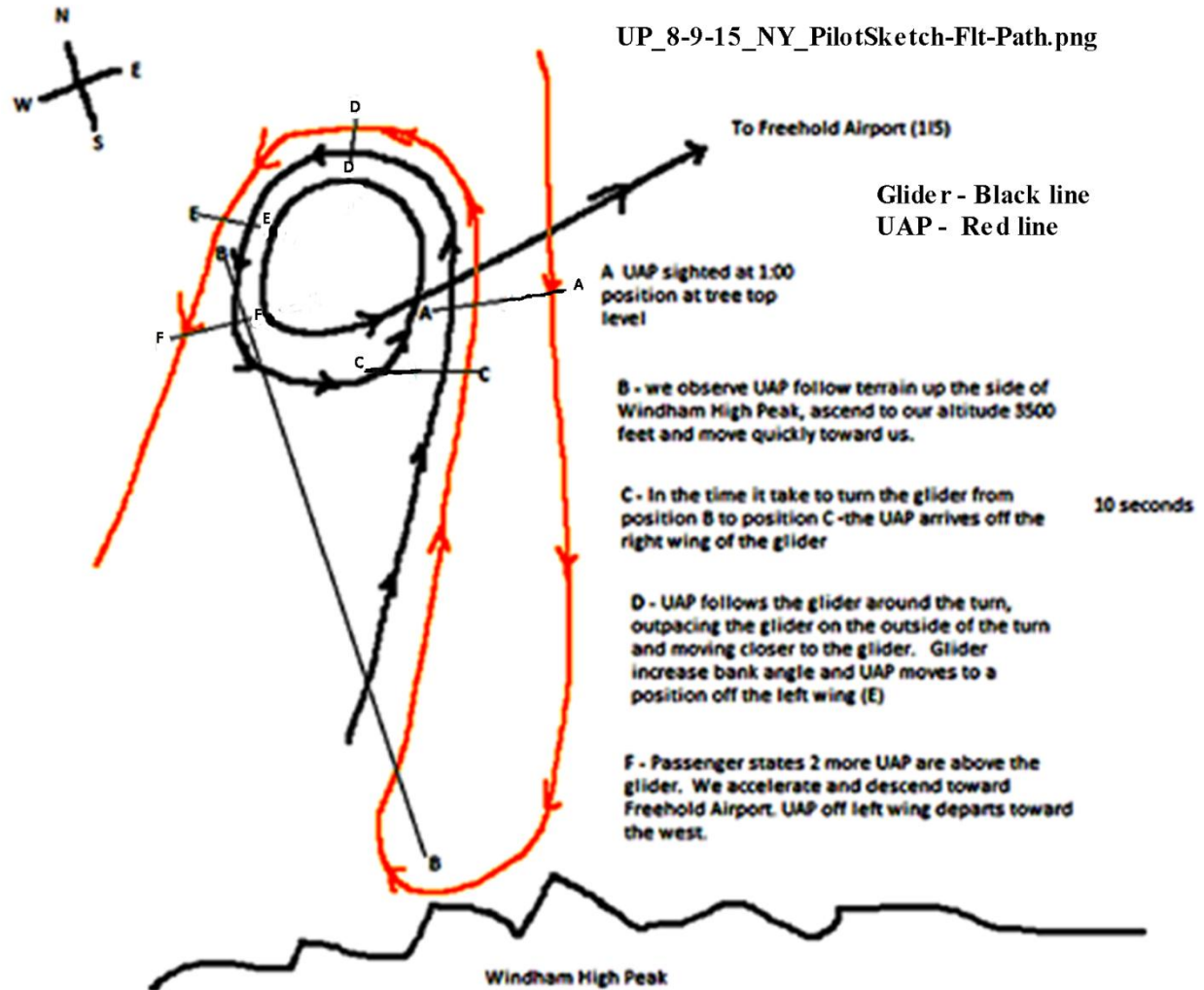


Figure 7. Pilot Sketch of Relative Flight Paths

Referring to Figure 7, each lettered location attempts to show where the glider and UAP were at the same moment. Glider location A is the same as the “initial contact” in Figures 4 and 6. In Figure 7 the UAP’s corresponding initial location is found by extending the black line (A – A) until it crosses the right-most red (UAP) flight path line showing that the object was traveling in

a southerly direction at the time.

In order to try to keep the object in sight the pilot executed a left-hand banking turn shown in **Figure 7**. When they had passed more than three-quarters of the way through this 180 degree turn the UAP, (B – B) had risen to their own altitude as it reached its southern-most point of travel near the Windham High Peak. Then it had turned and flew at a high velocity back toward the glider - now about 3.7 miles north of it - in about ten seconds which is equivalent to a velocity of 1,260 mph. Even if we assume say 30 seconds of UAP flight over this distance then the calculated velocity reduces to 420 mph. which is still fast.

The UAP arrived beside their right wing and then paced the glider maintaining an apparently constant distance of about 50 yards distance. (C – C), (D – D) and (E – E). Somewhere between (D – D) and (E – E) the UAP quickly and unexpectedly moved from the right side of the glider to directly in front and then to a position off its left wing at a constant distance of from 25 to 30 yards where it paced them for several more seconds. No sounds other than the normal air stream noise were heard.

At location (F – F) the passenger happened to look steeply upward toward a cumulus cloud directly above them and saw two more objects that looked to him identical to the original object. He said (tel. com. August 14, 2015) that the two objects were about 200 feet apart vertically and seemed to hover, i.e., they did not drop down toward the glider. “I was reminded of the brim of a hat,” he said. One of the objects had a little reddish hue; it could have come by reflection from the bottom of the cloud above it. The lower object could have been within 1,000 feet or less of them and both were angularly large. The passenger indicated that the width of two of his thumbnails (each assumed to be 0.75” wide and held side by side at 18” arm’s length) would “barely have covered the length of one of the objects.” This width is approximately equivalent to 3 deg. 58 min arc. So, if this object was 1,000 feet away it would have been 69 feet tall. He informed the pilot of the two objects who glanced up but not seeing the objects decided to return to the Freehold Airport immediately. They landed without incident. Over the next six minutes as the glider descended to the airport all three objects were seen flying out of sight together toward the west “...at a pretty high rate of speed”.

When viewed from above the UAP had a silver or whitish upper surface (round in plan view?), about 2 to 3 feet diameter, with small rounded protrusion centered on its upper surface. **(Figure 9 and 10)** Below this, the main body was a “pitch black” having the shape of a hemisphere or an iron kettle and also about 1 foot high. These details are based on seeing the object from the side and at a nearer distance. There was a straight, pipe about 4 or 5 feet long that extended vertically downward from the center of the main body. The passenger described it as having a 2 to 3 inch diameter at the top and tapering to about 1” at the bottom. According to the pilot this pipe had three, equally spaced thin “whitish” fins attached to the pipe. The passenger drew these as three darker “bands” slightly larger diameter than the pipe itself which was described as dull and not shiny. Significantly, at no time during the encounter did this pipe appear to tilt from vertical (due to wind resistance or inertial forces). No flight control surfaces or visible means of propulsion were visible. In the words of a NARCAP aerodynamicist, this object was “...not configured to minimize drag, maximize lift, and/or generate maneuvering and control forces.”

That evening the pilot called the New York State Police to report the incident and, on Tuesday morning (August 12, 2015) a Federal Aviation Administration official (Mike Baringer) in Albany, New York to find out whether any NOTAMS had been issued concerning unmanned aerial vehicle flights in the area. There were none. He contacted NARCAP about this incident on Wednesday, August 12, 2015.

The author developed a list of questions for the pilot and phoned him on Thursday, August 13, 2015. He was very helpful and made arrangements for the author to telephone the passenger on Friday, August 14, 2015 concerning his recollection of events. He also was very supportive as was the passenger who was contacted.



Figure 1. Grob 103 Twin Astir glider



Figure 2. Typical Forward View During Flight from Front Seat  
(Not taken during this flight)



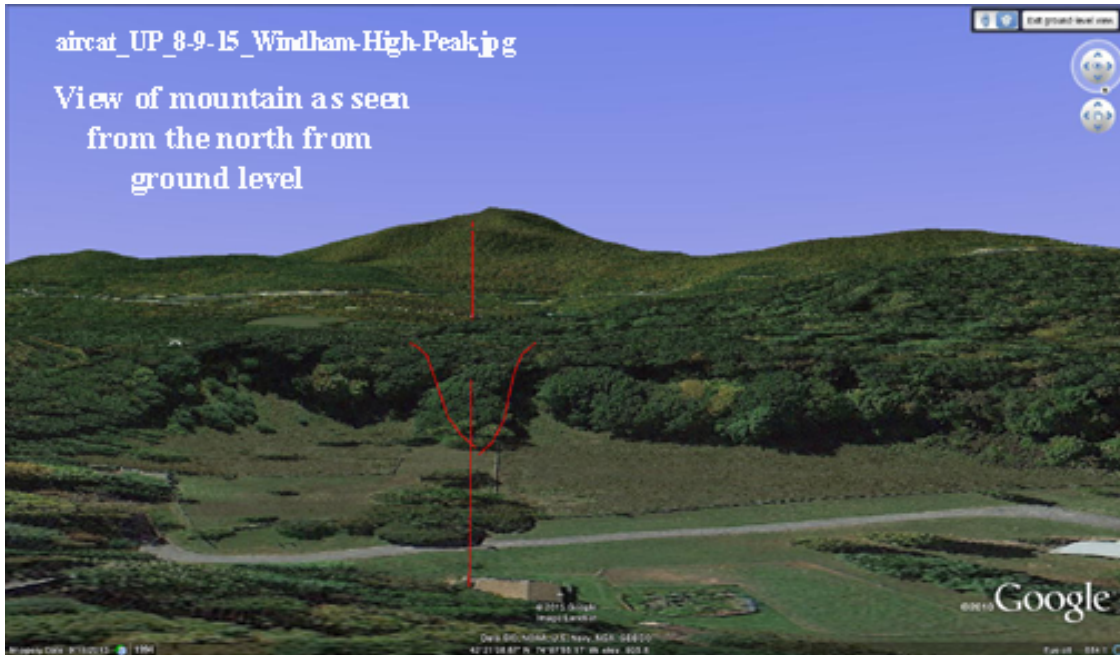


Figure 3. Windham High Peak viewed from ground level from the north

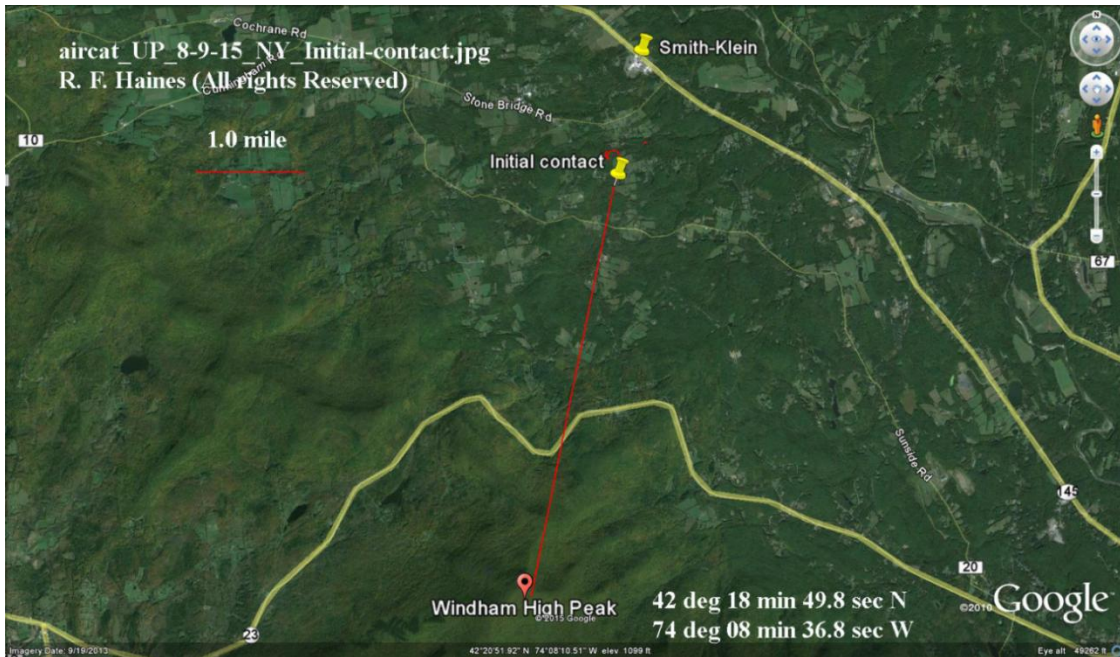


Figure 4. Larger Area View of Early Glider Flight Path



Figure 5. Glider's Rear Seat Flight Instruments and Controls

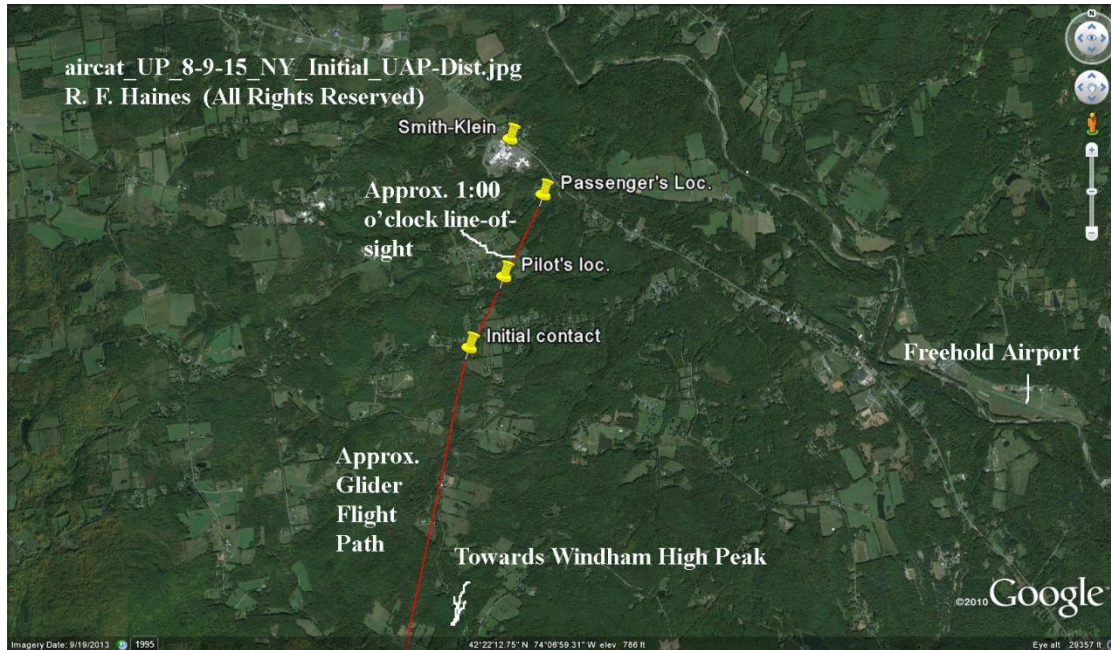


Figure 6. Line from Glider at Initial Contact toward the UAP at 1:00 o'clock direction showing calculated, distances of UAP for each witness



Figure 7. Pilot's Sketch made on August 13, 2015

Compare the following differences with the passenger's sketch (in following figure) :

1. Width of upper section
2. Width of vertical pole
3. Viewing angle (pilot's is more of a side view)
4. Shape of three details on pole

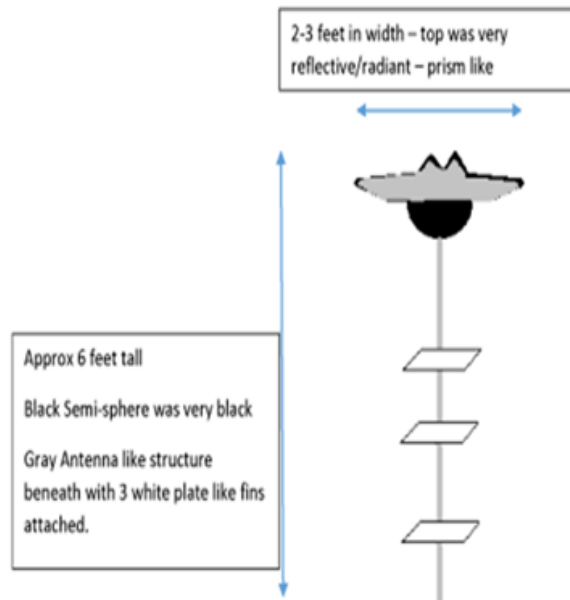
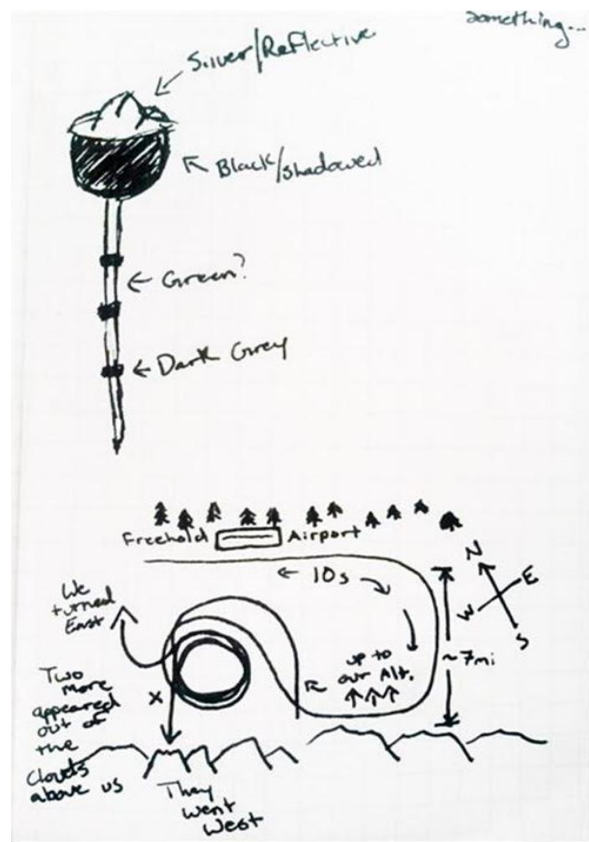


Figure 8. Passenger's Sketch made on August 9, 2015

Following comments about the object obtained during phone call on August 14 and 15, 2015.

1. The pole protruding from body of vertical pole was definitely tapered (from about 2 - 3" diam. at top to 1.0" at bottom).
2. Bottom: Reconstructed Flight Path.

Note that the pilot claimed the UAV did not make multiple loops as shown but only one, turning outside the glider's curved flight path.



### Additional Details

At first the pilot thought the object was some kind of drone and then, perhaps, an aluminized party balloon (due to its light flashes) and then a box kite of some kind but its forward velocity was too high for the latter two. At first the passenger thought they were seeing sunlight reflected from the top of a vehicle traveling “really fast” on a roadway (Hervey Street Road?) partially hidden by trees. The flashes were intermittent (irregular), multi-colored (“green, some reds”), “very vivid,” and not like reflections (of sunlight). At this time the sun was above and behind the airplane.

The weather that day at Albany was warm and dry, the dew point ranged from 54 to 58 deg. with winds generally from the north at six mph but shifted around to 4 mph from the south at 1800 hrs. Cumulus cloud bases ranged from (estimated) 4,500 to 4,700 feet AGL. Visibility was fifty mile.

This report is based on unsolicited information provided to NARCAP by the pilot via e-mail (through the website) and by telephone interviews conducted by the author on August 13 and 14, 2015 in which many questions were answered by the pilot. A telephone interview with the passenger took place on August 14, 2015. Both witnesses were very willing to help and answered directly, clearly (in aviation-related language), and without any evasion.

The reporting pilot filed a FOIA request with the Federal Aviation Administration and on 21 August, 2015 was assigned for reply to their Air Traffic Organization (ESA-AJT), Atlanta, GA office. He requested: Secondary and Primary radar data from all antennae that would cover this (NE Greene County, NY) region, tower day logs at Albany Airport for that entire day and Albany tower voice recordings for thirty minutes prior to the event (15:15) to one hour after the event (16:15). He had not received these data at the time of this writing.

### Glider Information

This German designed and built glider is 26.8 feet long with a wing span of 57.4 feet. Its maximum flying weight is 1,279 lbs., stall turn speed = 111 mph; maximum red line speed = 155 mph; normal flying speed range = 48 to 105 mph; minimum landing speed = 59 mph; and V(stall) speed (with no airbrakes) = 47 mph for the two-seat model. It is licensed only for daytime VFR flight.

**Figure 9** shows circling radius (feet) for various a range of air speeds (knots) and four different bank angles. This curve is for a glider with a 32 kt. stall speed which is less than that of the Grob 103 but it provides an estimate of minimum turn radius.

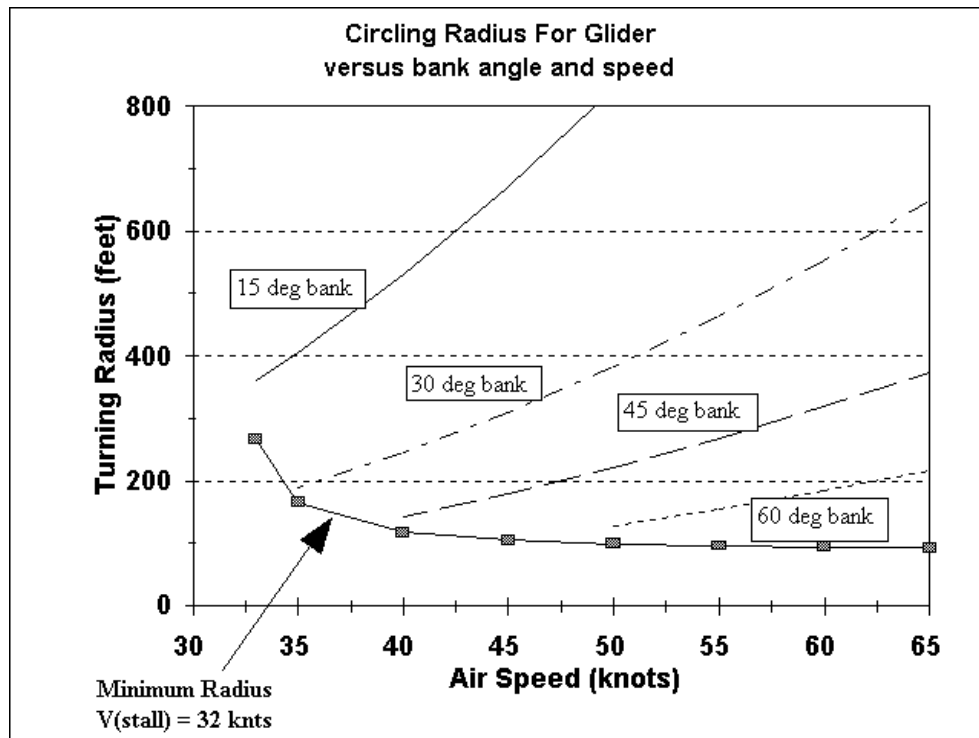


Figure 9. Circling Radius for Gliders with V(stall) = 32 kts. for Four Bank Angles

Assuming a thirty (30) degree left-hand bank angle and 50 kt. air speed a circling radius of under 300 feet was plotted in **Figure 7**. Nevertheless, the exact circling radius is not as critical as the larger issue of the close and obviously coordinated flight of the unknown object.

### Eye Witness Details

The pilot (R.P.) is 57 years old and has a total of 204 hrs. total flight time and forty hrs. in this glider. He has also flown other gliders: Grob 102, Blanik L-23, Schweitzer 1-26 and the Schweitzer 2-33. He has also flown single engine Cessna aircraft.

The passenger (P.C.) is not a pilot but is studying for his A & P Mechanics license. This was his first flight and he enjoyed it. He answered all questions without hesitation

### Possible Unmanned Aerial Vehicle Connection

A small possibility exists that these objects were unmanned aerial vehicles (UAV) being flight tested in the region. On December 30, 2013 the Federal Aviation Administration

announced its selection of Griffiss International Airport in Rome, New York (some 88 miles to the NW of this incident) to be the coordinating center of one of the nation's six national UAV test sites. As of March 2015, more than 195 test flights had already taken place. According to the Government Accounting Office "these flights provide operations and safety data to FAA in support of UAS integration." In addition, the FAA has provided all test sites with a Certificate of Waiver or Authorization *allowing small UAS operations below 200 feet anywhere in the United States.* (italics mine)

"It was not immediately clear if the FAA designation will lead to more drone flights over Central New York," according to reporter Weiner (2013). He went on to write that a major objective of these sites will be to "...figure out how to integrate drone aircraft into the national air space." In his bold and forward sounding assertion Michael Huerta, FAA Administrator, said, "Safety continues to be our first priority as we move forward with integrating unmanned aircraft systems into U.S. airspace. We have successfully brought new technology into the nation's aviation system for more than 50 years, and I have no doubt we will do the same with unmanned aircraft."

The so-called NUAIR alliance who proposed this particular New York state testing site to the government had touted the Northeast as an ideal test site because of the availability of 7,000 square miles of restricted and special use air space for testing drones and related technology. It can now be asked whether the area where this dangerously close encounter took place was considered as part of this "ideal test site?"

The alliance works with industry partners that include Lockheed Martin in Salina, Saab Sensis in DeWitt and SRC in Cicero, New York. Current academic partners include Syracuse University, Onondaga Community College, Clarkson University, Cornell University and Rochester Institute of Technology.

The partners also expect to work with the New York Air National Guard's 174th Attack Wing at Hancock Field in Mattydale, New York (36 miles SSW of Griffiss) to help the FAA meet a 2015 deadline for integrating the unmanned, remotely-piloted drones into the nation's air space.

The 174th Attack Wing operates a squadron of MQ-9 Reaper drones, piloted remotely from Mattydale in missions over *Afghanistan and in training missions over restricted air space in Upstate New York.* (italics mine) Clearly, this UAP was not a Reaper drone.

Back in 2013 the NUAIR officials said that much of the early research and development work would be done by academic and industrial partners focusing on developing "sense and avoid" technology that would ensure the safety of drones and commercial aircraft. The present incident would certainly qualify for this type of drone testing but, unfortunately, without the prior knowledge of the glider's occupants or the FAA since no NOTAMs were issued!

In an effort to find visual similarities between known UAV and the object involved in this close encounter the author send both witnesses the following photographs of UAVs that were flying in the 2010 to 2015 time frame asking if any might have looked at all similar to what they saw.



*REUTERS/Erik De Castro*

**A U.S. military surveillance drone camera flies in Musa Qal-Ah district in Helmand province, southwestern Afghanistan November 2, 2012.**

Figure 10. Honeywell “T” Hawk MAV Drone  
< <https://aerospace.honeywell.com/thawk> >

Response (August 18, 2015) from the Pilot. “Thanks for these photos. It’s possible what we saw was a ducted fan device. However what we saw was more streamlined. Given how quickly the first UAV traversed the distance from Windham High Peak to our location, slowed quickly and followed (outpaced) me around the outside of a turn it was an awesome display of technology. I’d be very proud if what we saw was designed and built by a U.S. company.” The pilot wrote that he found no similarities with any of these photographs.

No response was received from the passenger to Figures 10 through 13 as of August 27, 2015.





Figure 11. Sikorsky Aircraft Corp. Cypher II "Dragon" UAV  
(Diameter: 6' 2"; Height: 2'; Rotor Diameter: 4'; Max. speed: 145 mph.  
Range: 115 miles; Endurance: 2-3 hrs.)



Figure 12. Micro Autonomous Systems, LLC, Heli Spy II  
(Diameter: 11"; Height: 27"; Velocity: 75 mph.; Endurance: 30 min.:  
Flies in vertical orientation *but tilts 60 deg forward at top speed.*)



Figure 13. Allied Aerospace Industries, Inc. iSTAR VTOL  
(Now Triumph Aerospace Systems)

### Summary and Conclusion

Considering the apparently high velocity of this object(s), its ability to stop suddenly and then form up on the glider while maintaining a constant separation distance and then rapidly change its position relative to the glider on its opposite side along with its lack of any visible means of propulsion or lift, its apparent lack of propulsion-related noise, and its continuously vertical orientation it is unlikely that this object was a UAV, at least of any currently known, unclassified types.

This case must remain open until additional data is available. The object(s) remain unidentified at this time.

### Reference

Weiner, M., FAA Selects Central New York as National Test Site for Drone Research,  
< [http://www.syracuse.com/news/index.ssf/2013/12/faa\\_selects\\_central\\_new\\_york\\_as\\_national\\_test\\_site\\_for\\_drone\\_research.html](http://www.syracuse.com/news/index.ssf/2013/12/faa_selects_central_new_york_as_national_test_site_for_drone_research.html) > Dec. 30, 2013.