

Flight test result for outdoor flight on 7th June 2006

1. Airspeed Vs GPS speed

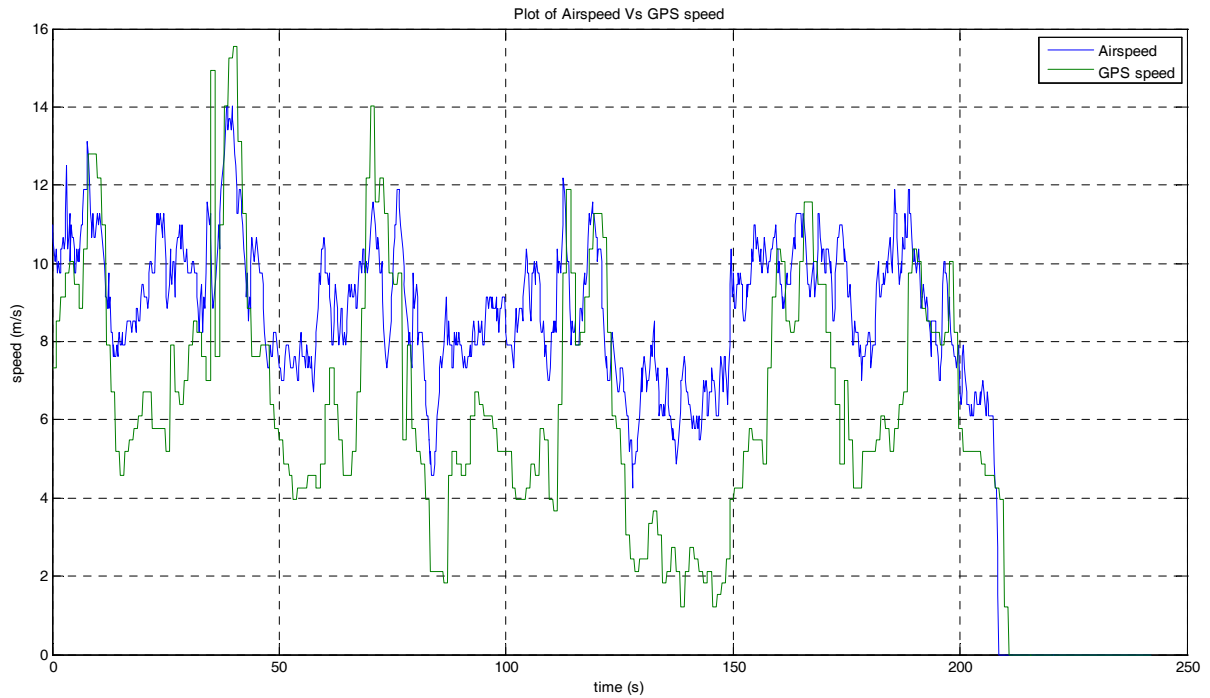


Figure 1. Plot of airspeed vs GPS speed

From the plot in figure 1, the section that there is a big difference in the airspeed measured and the GPS measured is due to the head wind that plane is experiencing over the time history of the flight. Figure 2 shows the head wind magnitude with respected to the heading of the plane, which is as high as almost up to 7 m/s and from the video of the flight testing, we can see that the plane is almost hanging on stationary in the sky with the strong head wind.

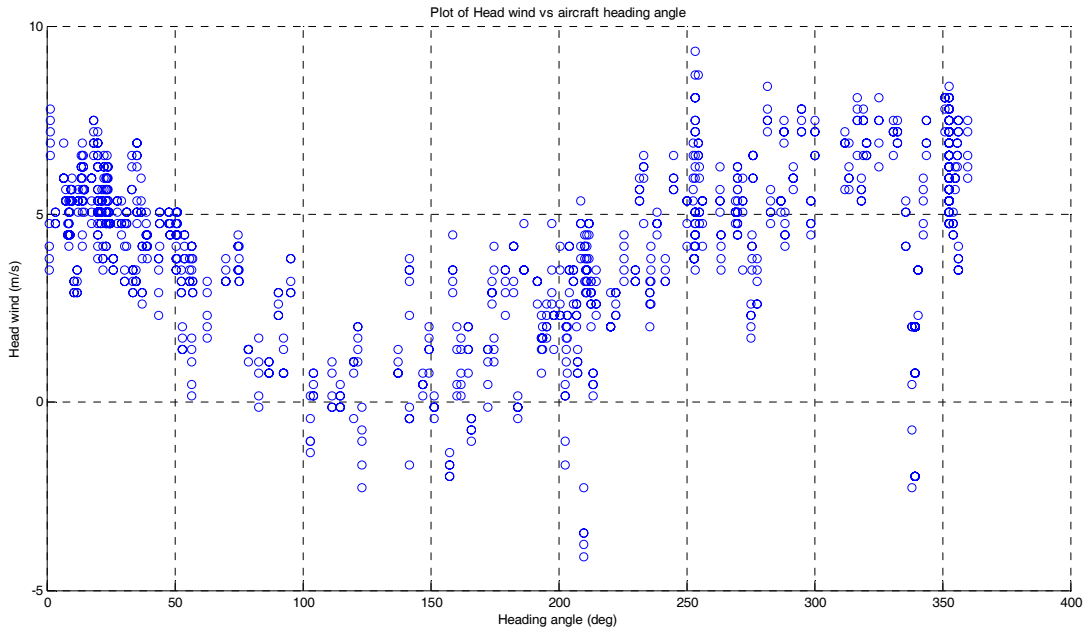


Figure 2. Head wind experience by the plane at different heading

2. Comparison of Altitude measured by barometer and GPS

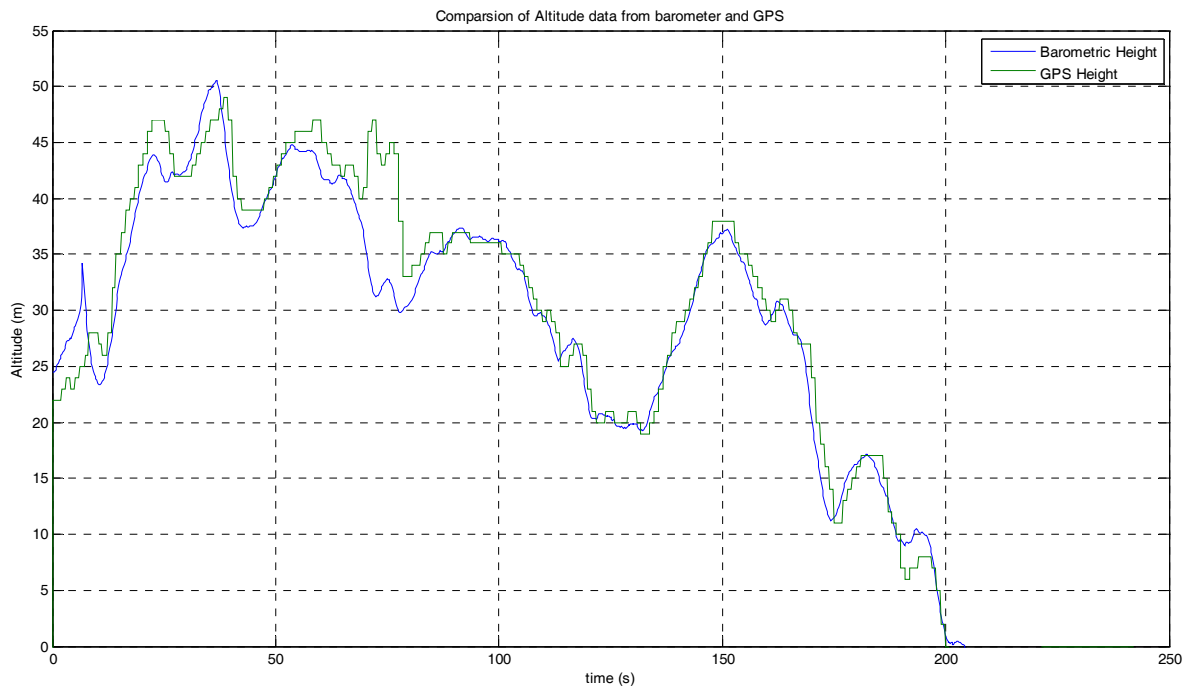


Figure3. Plot of Altitude

Figure 3 shows the comparison of the altitude measured by GPS and barometer. Both the sensors give a pretty good trend matching for the flying altitude of the plane and we can see the quantization of the GPS height measurement due to a lower GPS data rate.

3. Flight Path

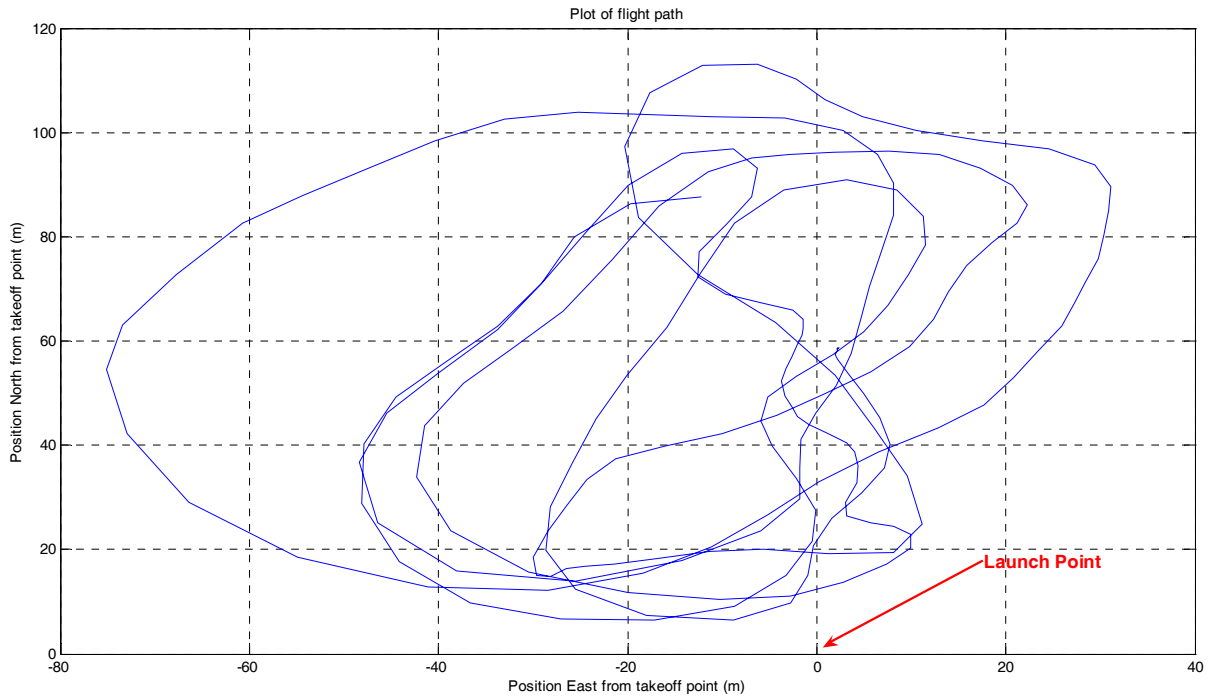


Figure 4. Flight Path

Figure 4 shows the flight path of the plane in the flying field in which we are circling in a 100 m by 100 m square for the whole duration of the flight.

5. Landing Approach

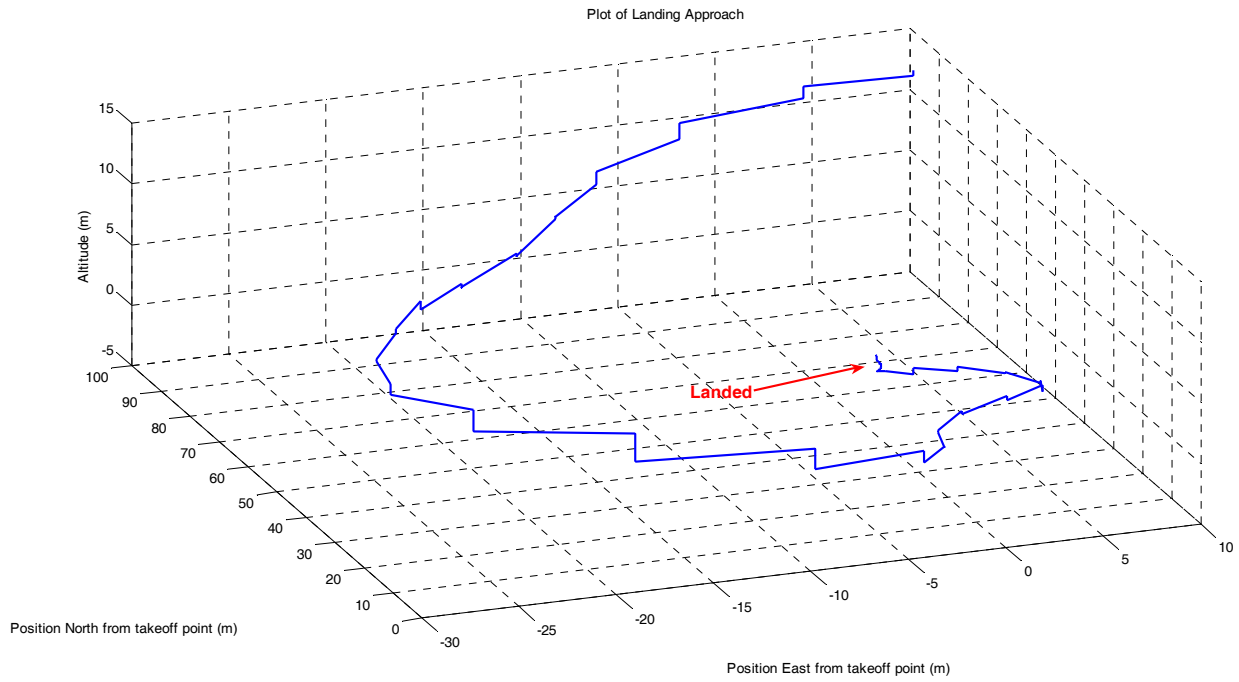


Figure 5. Landing approach

Figure 5 shows the landing approach of the plane which can see from the video recorded.