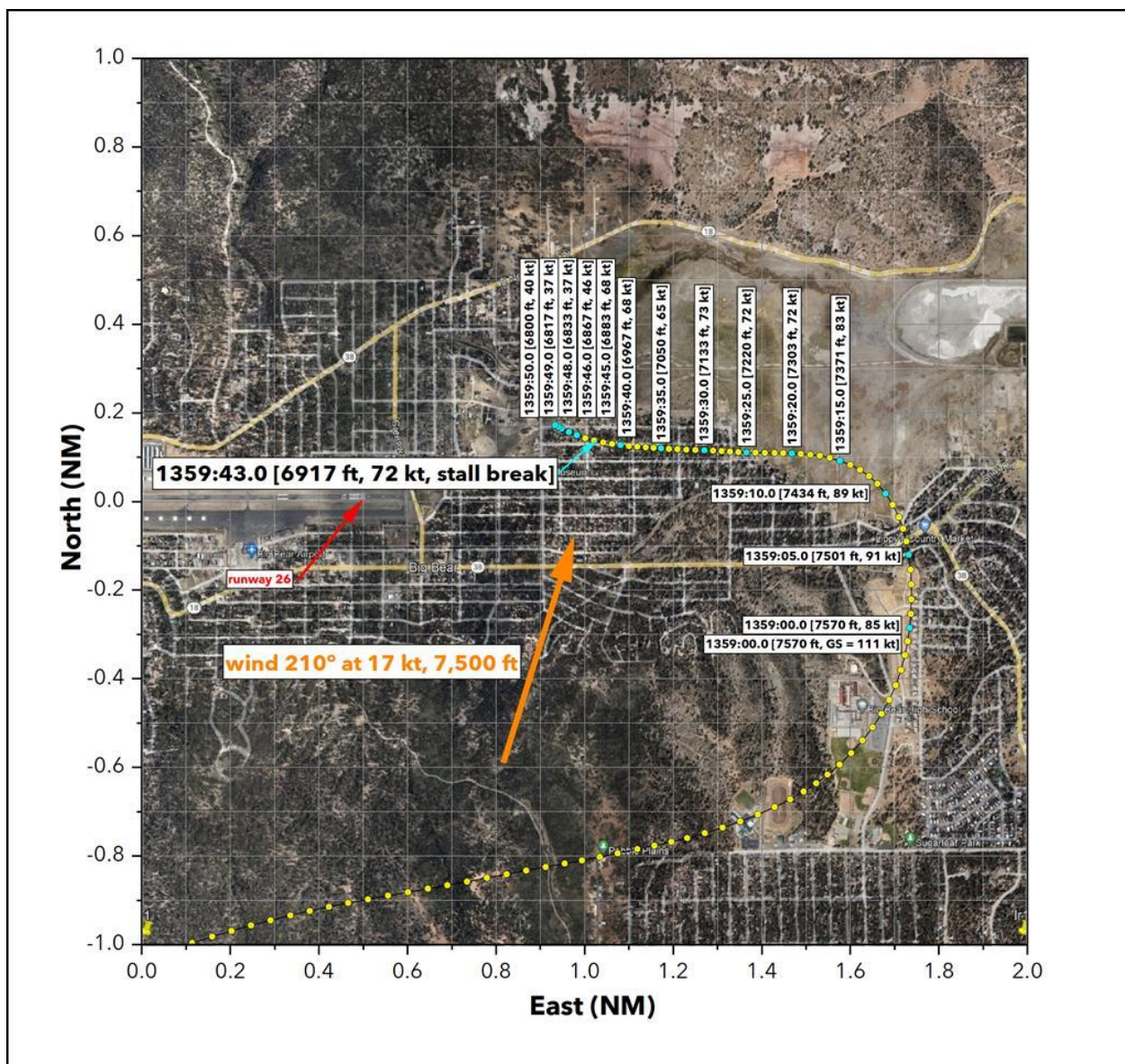


From: Timothy Burtch
Sent: Monday, November 6, 2023 2:22 PM
To: Michael Hicks
Subject: RE: WPR23FA173 Performance request

Hello Michael:

I have reviewed the 1200.Aero ADS-B data that you provided for the Beechcraft A36 (N2038Y), and I have incorporated wind data from the sounding provided by AS-30. It appears the airplane stalled while on short final.

Here is an overlay of the left downwind, base, and final for runway 26 at Big Bear City (L35). It also includes altitude and estimated airspeed for select times on base and final (turquoise data points).



A 17 kt tail wind combined with the high airport elevation produced a ground speed that was much greater than the airspeed. See Figure 2. This may have deceived the pilot with the “illusion” of speed if he was not monitoring his instruments while flying close to the ground and resulted in an (overly) large power reduction. The high ground speed would also explain why the airplane overshot the extended runway centerline as shown in Figure 1.

WPR23FA173: Beech A36, N2038Y
Big Bear City, CA
5/1/2023

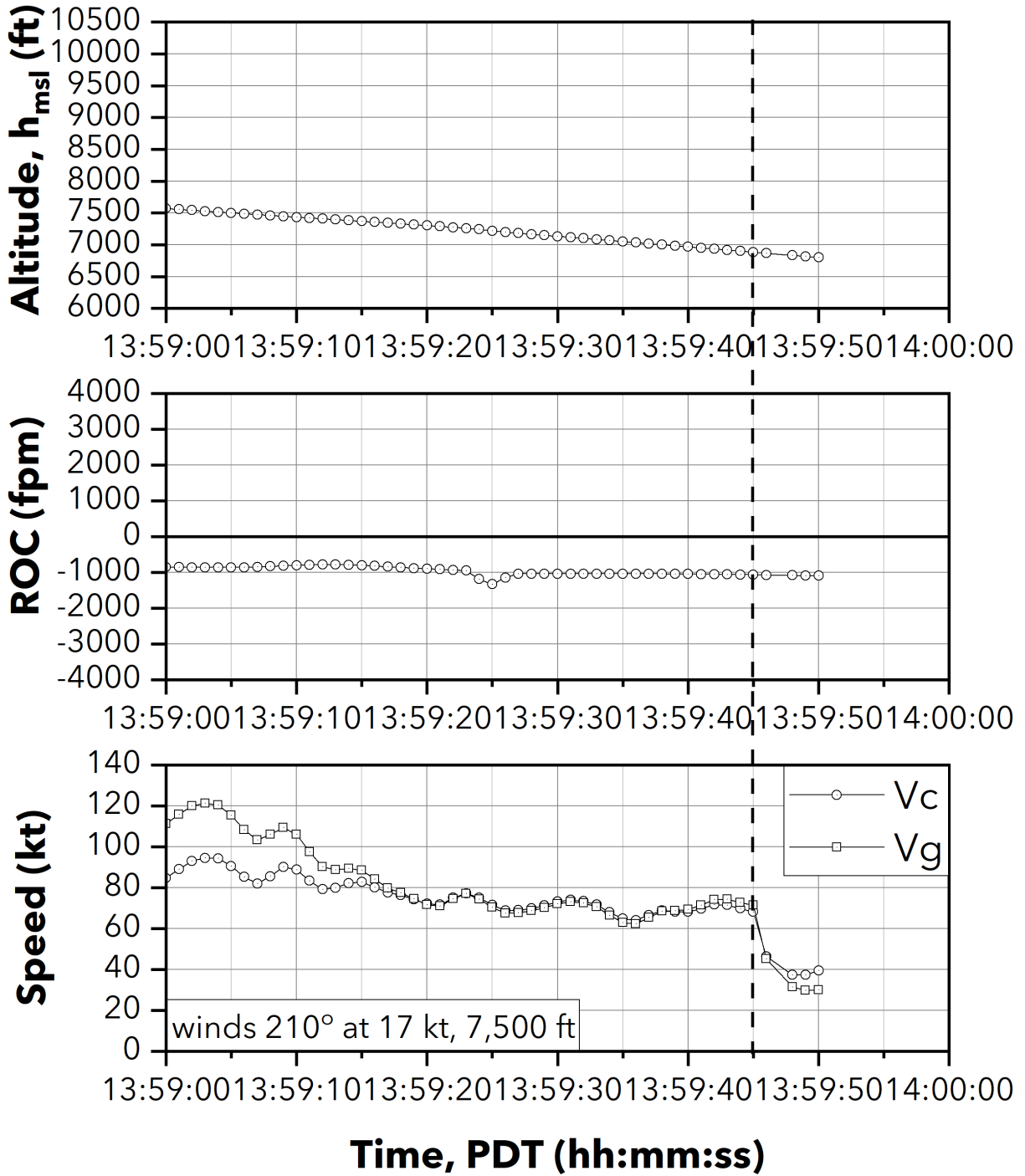


Figure 2: ADS-B Altitude, Rate of Climb, Ground Speed, and Estimated Airspeed

Notice how the airspeed and groundspeed come together at 1359:15 in Figure 2, when the airplane turns onto final. The ADS-B data indicate that the pilot did try to align the airplane with the runway with a 20 deg left turn on final. However, that's also when the airplane appeared to have stalled. The normal load factor likely increased, and the wing angle-of-attack exceeded the critical AOA. In addition, I suspect the right wing stalled first because of the deflected aileron as well as the heading change in the ADS-B data.

WPR23FA173: Beech A36, N2038Y
Big Bear City, CA
5/1/2023

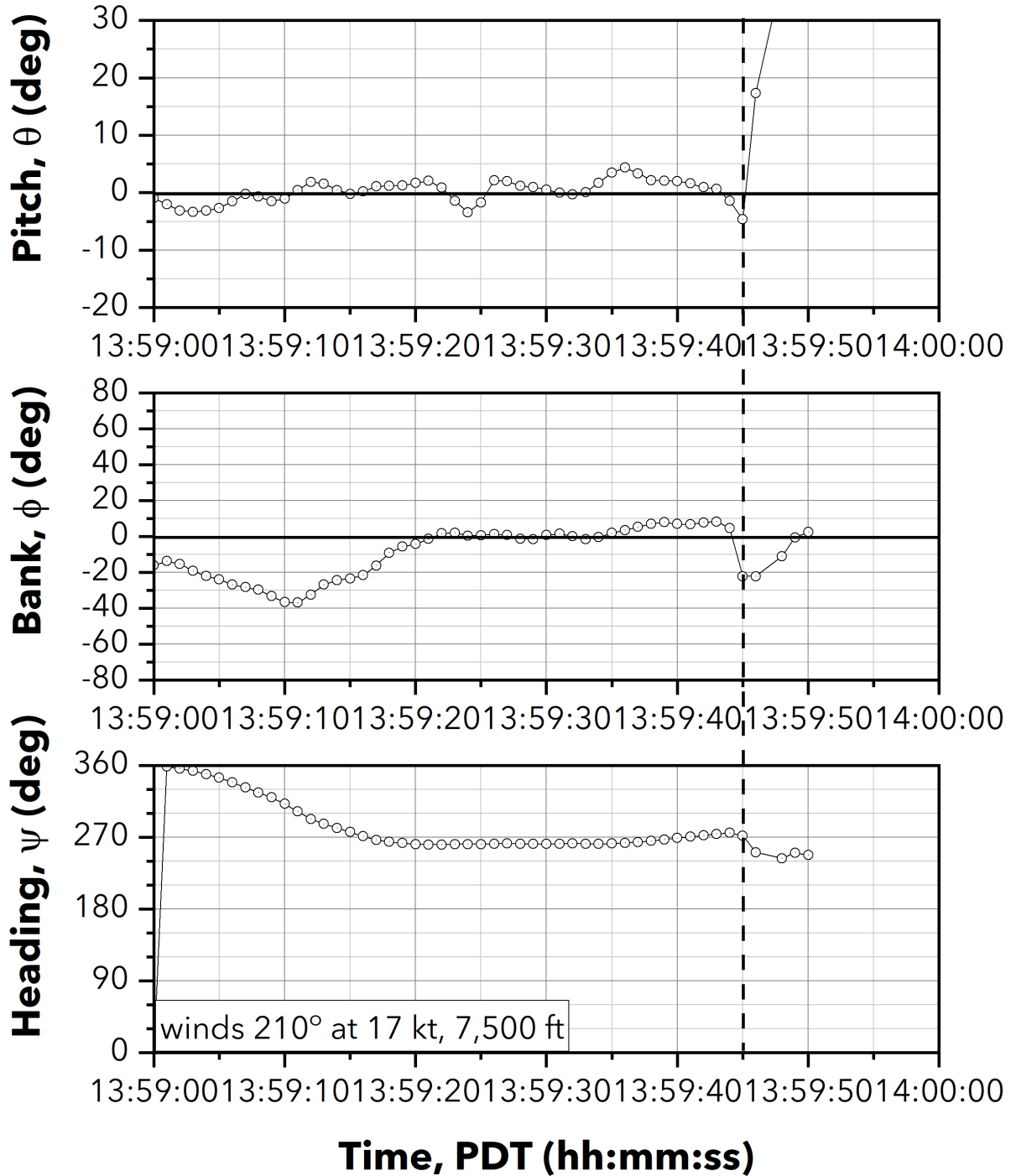


Figure 3: Estimated Pitch, Bank, and Heading Angles

I hope this answers your airplane performance questions. Please let me know if you require any additional information.

Sincerely,
Tim