



This is the first analysis for Specimen. A speed and heading test occurred on 6/21/08, and 5 wiggle tests occurred on 6/25/08 in a fading breeze starting at 12 knots and ending at 6 knots. The fading breeze demonstrated considerable shear, varying from  $-5^{\circ}$  to  $-9^{\circ}$  (left shear).

**Attachments:**

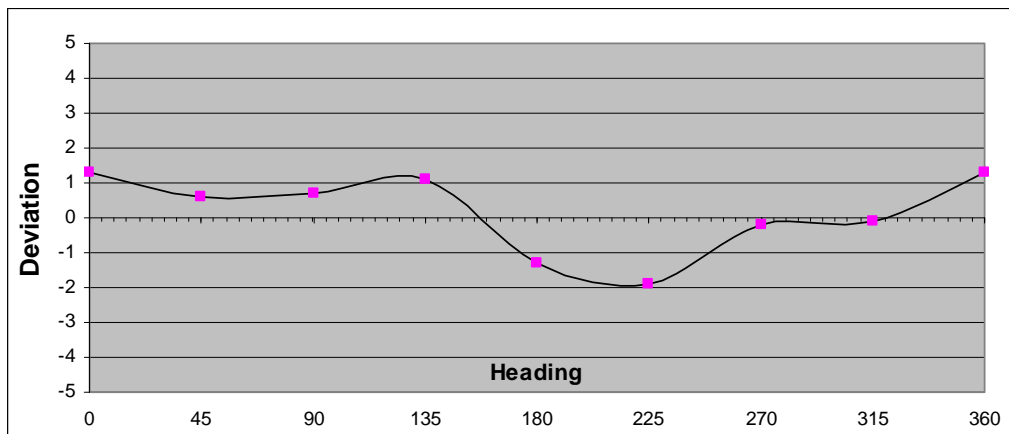
1. DWA- Specimen -080702.pdf (this report).
2. Recommendations.txt (cal changes for Analyst).
3. Compass.cor (Compass correction table for T1).

Drag documents 1 and 2 into Analyst. They will be copied into the Analyst directory and applied to the 'Suggested' calibrations column.

If you are using the T1 processor, remove the compact-flash card and copy the correction table(s) into it.

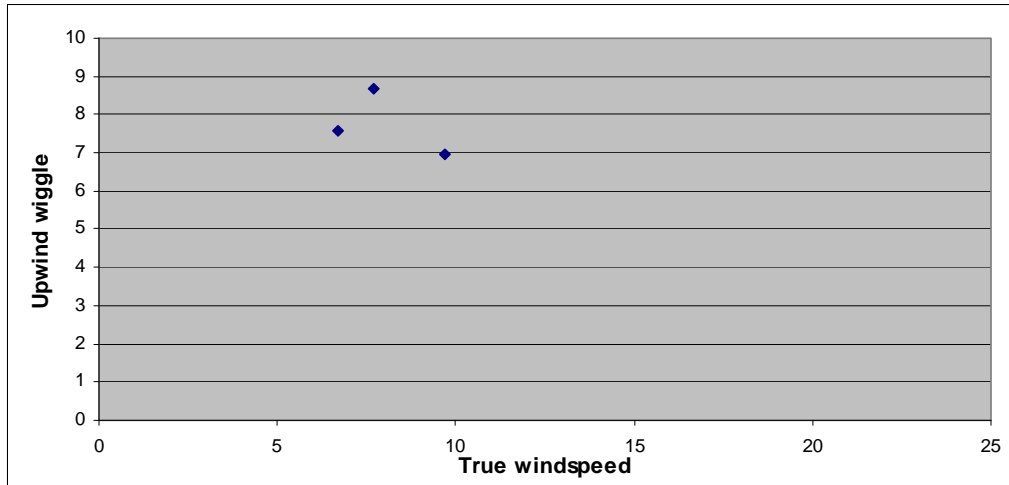
**Conclusions:**

1. Compass misalignment is less than  $1^{\circ}$ .  
Compass lubber offset is  $-0.8^{\circ}$ . Peak deviation is  $-1.9^{\circ}$  is at  $225^{\circ}$  heading. The test occurred in a current of 0.26 knots  $\rightarrow 96^{\circ}$ . A compass correction table is attached to this report.

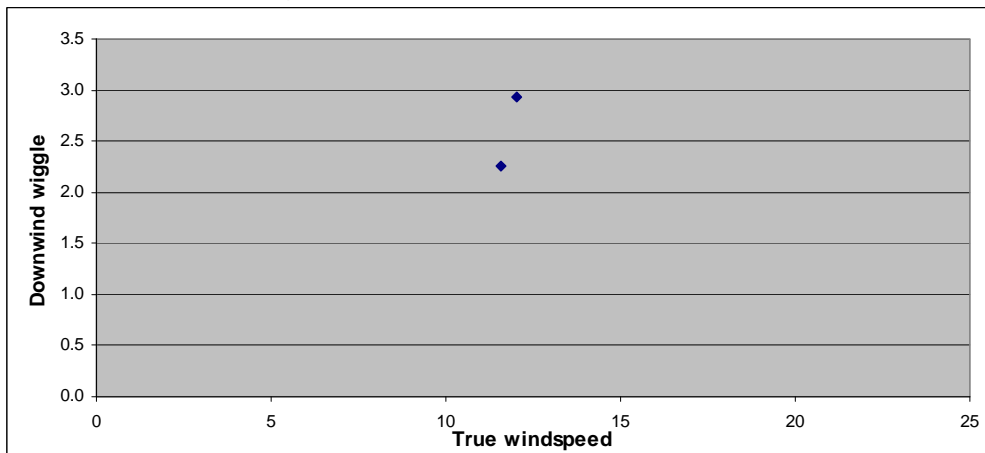


2. Boatspeed calibration should be changed from 1.10 to 1.06.

3. Upwash calibration should be changed from 3.0 to 5.4.  
Mean upwind wiggle was 7.7 in an 6 to 8 knots true. The limited range of test true wind speeds prevents suggesting an Upwash Slope calibration at this time.



4. Apparent Windspeed calibration should be changed from 1.13 to 1.12.  
Mean downwind wiggle was 2.6 in 11 to 12 knots of true windspeed. Taken by itself, this data suggests changing the cal to 1.16. However, Boatspeed cal change modifies this number by -4%.



#### Recommendations for further calibration testing:

Further testing should be done in over 12 knots to establish Upwash Slope.

**Speed & heading results:**

06/21/08 16:24      Speed & heading test performed  
 Average Boatspeed: 5.5 ±0.5 knots  
 Mean compass deviation: 1.1°.   
 Peak deviation -1.9° is at 225° heading.  
 Cals<sub>1</sub>: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000

**Wiggle results:**

Date	Vt <sub>2</sub>	Test
<u>06/25/08 19:08</u>		<u>08-06-25-19-08.Log</u>
06/25/08 19:08	12.0	Downwind, 3 jibes (ET 9:58) Cals: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000 Wiggle: +2.9 (42%)
06/25/08 19:18	11.6	Downwind, 4 jibes (ET 12:49) Cals: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000 Wiggle: +2.3 (64%)
<u>06/25/08 19:57</u>		<u>08-06-25-19-57.Log</u>
06/25/08 19:58	9.7	Upwind, 5 tacks (ET 13:21) Cals: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000 Wiggle: +7.0 (91%)
06/25/08 20:12	7.7	Upwind, 1 tack (ET 4:50) Shear: -9.3 Cals: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000 Wiggle: +8.7 (97%)
06/25/08 20:17	6.7	Upwind, 2 tack Shear: -3.6 Cals: 1.10, -0.007, -2.9, 1.15, 6.9, 3.0, 0.000 Wiggle: +7.6 (93%)

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<sup>1</sup> Cals: Boatspeed Master, Boatspeed Offset, Wind Angle Offset, Apparent Windspeed, Leeway, Upwash, Upwash Slope

<sup>2</sup> Vt=Velocity True