Summary of sonic, prop azimuths

From http://www.ngdc.noaa.gov/geomagmodels/struts/calcDeclination, the magnetic declinations of the sites varied from 12 11' to 12 17' east. To correct the magnetic azimuths of the sonics and props we'll use a declination value of 12.2 degrees for all sites.

To rotate the wind vectors, NIDAS uses the pointing angle of the sonic +V axis (Vazimuth), which is pointing azimuth of the sonic boom + 90, or the sonic +U axis - 90.

The following are from logbook entries of the sonic azimuths.

Note that all measured azimuths are in degrees magnetic, with the declination set to 0 on the compass or datascope, to reduce untraceable mental mistakes.

site	log date	pointing	sonic boom azimuth, magnetic	boom azimuth, true (mag+12.2)	Vazimuth, true (boom+90)	notes
playa1	12/18	west	76.9 + 180 = 256.9	269.1	359.1	
playa1	1/5	•	77.3+180 = 257.3			
abc2	12/16	east	249.5 - 180 = 69.5	81.7	171.7	
abc2	1/4		80			shot from the back (centered mast in claws), so hard to see; still thought it was okay
hiland3	12/14	east	249.5 - 180 = 69.5	81.7	171.7	
hiland3	12/20		253.5 - 180 = 73.5	85.7	175.7	
hiland3	1/3		254.2 - 180 = 74.2			shot from across the street
wvally4	12/16	west	86.7 + 180 = 266.7	278.9	8.9	
wvally4	12/19	•	80.3 + 180 = 260.3	272.5	2.5	mast was not lowered between 12/16 and 12/19
wvally4	12/20	•	85.8 + 180 = 265.8	278.0	8.0	
wvally4	1/3	•	80.8 +180 = 260.8			
eslope5	12/15	east	248.7 - 180 = 68.7	80.9	170.9	
eslope5	1/5		251.1 - 180 = 71.1			
wslope6	12/13	west	77.8 + 180 = 257.8	270	0.0	
wslope6	1/6		79.3			
river7	12/13	west	85.5 + 180 = 265.5	277.7	7.7	

Props

site	log date	pointing	prop azimuth, magnetic	prop az, true (mag+12. 2)	notes
playa1	11/20	north		1.0	
playa1	12/18	north	171.7 + 180 = 351.7	3.9	
playa1	1/6	•	174.2+180=354.2	6.4	
wslope6	11/20	north		1.7	should this have been -1.7, which agrees with 12 /13?
wslope6	12/13	north	346.1	358.3	
wslope6	1/6		169.3+180=349.3	1.5	