MICROFRONTS95 Psychrometer Bias Analysis

There were three intercomparisons which were performed:

- Plotting profiles from near-neutral cases and estimating biases as the deviation from a line fitted to the ensemble of all the levels. Good cases were found on days 57, 60, 70, and 81. Only temperature profiles were examined.
- Comparing values when the "float" sensor was deployed at the same level as another sensor. This was only done at the South towers, and only cases when unit #79 was used were analyzed. The comparison showed rather large (>0.1 C) differences during the day, presumably due to differences in aspiration, so only nighttime values were used. The 3m level was never compared.
- Comparing values when the towers were lowered onto the ground on day 90. The "float" level was used as the reference for the South towers and the 3m level was compared to the 10m level at the North towers.

Psychrometer Temperature Biases

Day	Hours (UTC)	South Towers					North Towers	
		2m	3m	5m	7m	10m	3m	10m
57	08:30-09:30	0	0	-0.02	+0.01	0	0	0
60	07:00-08:00	0	0	+0.03	-0.01	0	0	0
66	to day 70	-0.02						
70	14:30-15:30	0	0	-0.02	0	0	-0.05	0
70	to day 73			+0.04				
73	to day 75				-0.02			
77	to day 79					0.00		
81	13:30-14:30	0	0	-0.01	0	0	-0.05	0
90	17:30-21:00	+0.08	+0.11	+0.10	+0.05	+0.01	+0.27	0

Psychrometer Humidity Biases

Day	Hours (UTC)	South Towers					North Towers	
		2m	3m	5m	7m	10m	3m	10m
66	to day 70	+3%						
70	to day 73			+3%				
73	to day 75				0%			
77	to day 79					-1%		
90	17:30-21:00	0.0%	-0.7%	-0.7%	-0.5%	+0.1%	-0.3%	0