NEEM weatherstations 2008

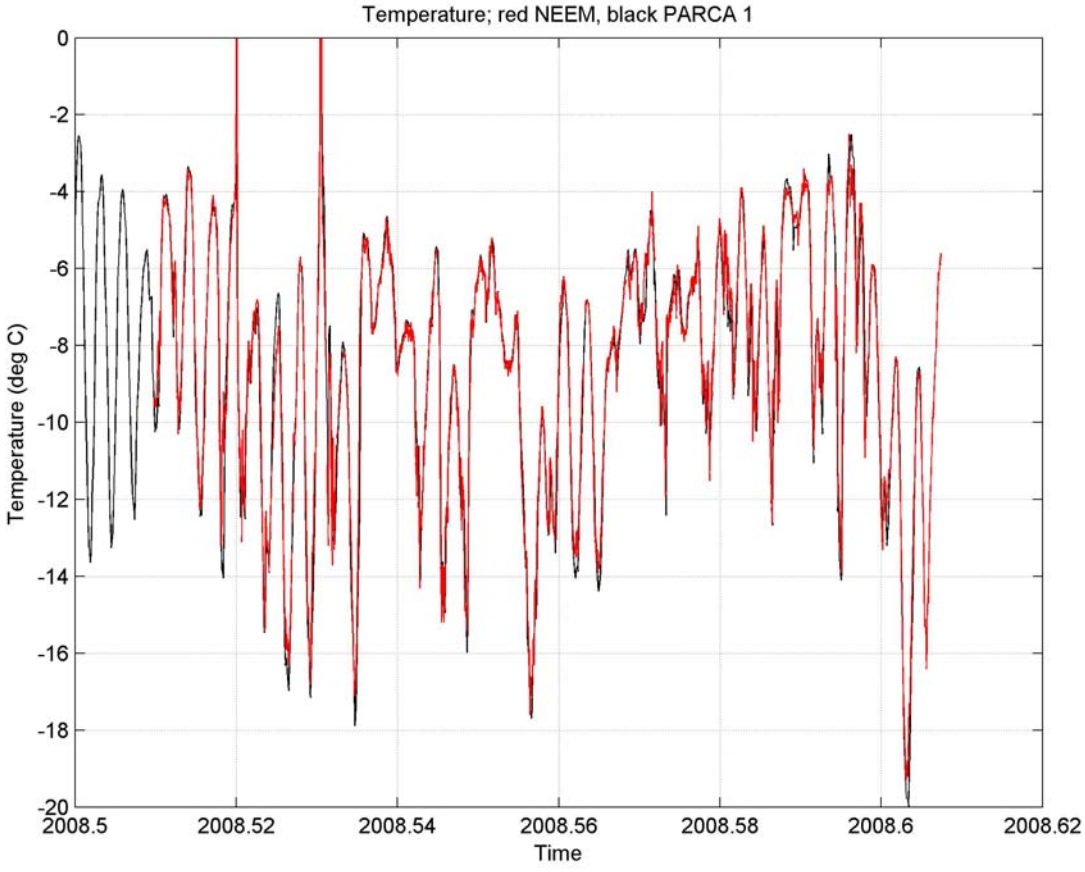
I have downloaded data from the NEEM weather station since 4 July 2008. The wind directions are only logged in 16 boxes (N,NNE,NE, ENE,E,ESE,SE,SSE,S,SSW,SW,WSW,W,WNW,NW,NNW) in Magnetic Values. (declination is appr. 45 deg so True = Magnetic-45)

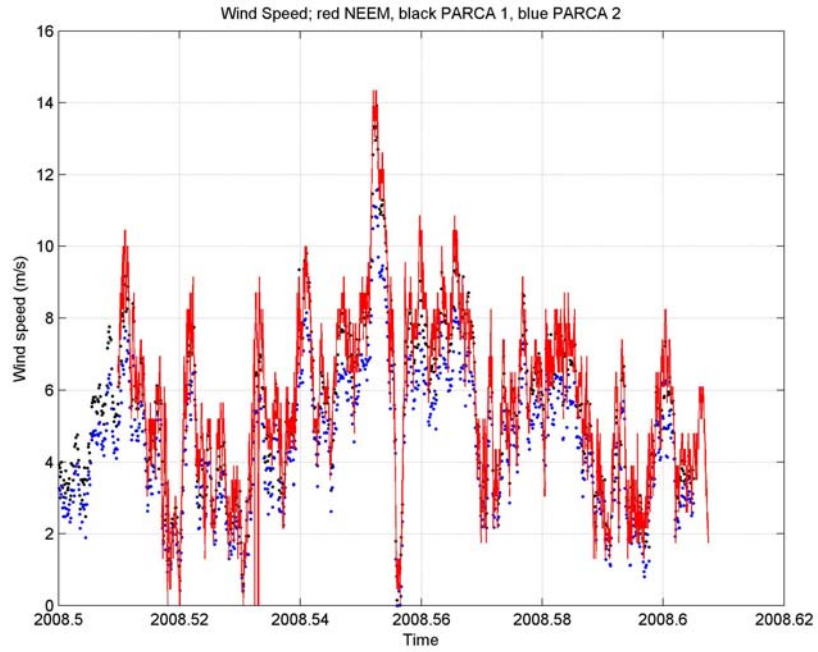
The PARCA weatherstation was downloaded 7 August 2008. There 29456 lines of data and as far as I can see the file CR10_1.dat contains the following data:

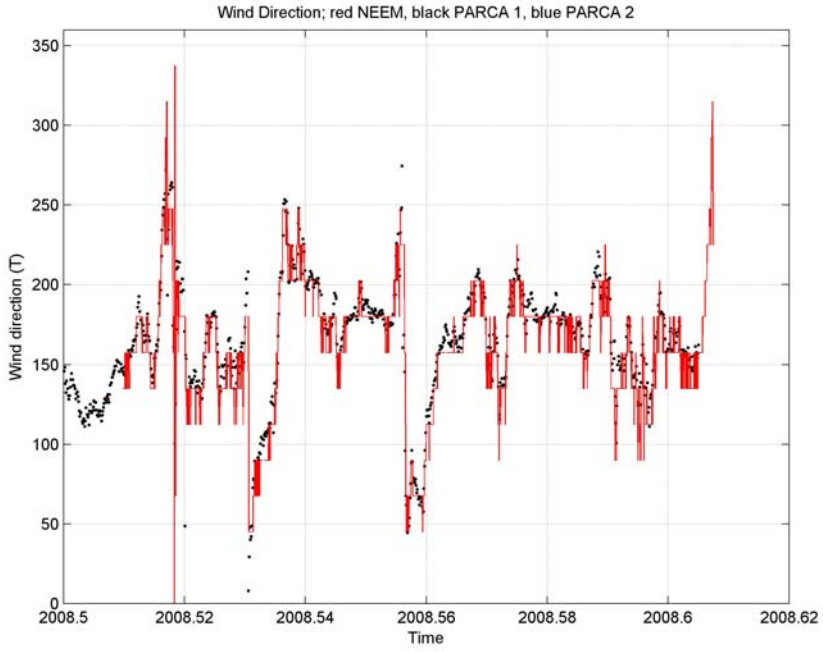
Line start	Line end	Day start	Day stop	Year
1	7612	88	294	2006
7613	15684	102	294	2006
15685	25068	102	306	2007
25069	29456	64	157	2008

Where there is overlap in the 2 first sequences of data they are identical. When downloading data it failed during my first attempt and this could explain that there are 2 first sequences are identical where they overlap (?)

The last sequence is observed to be identical with the data from the NEEM weatherstation if I shift the sequence with 63.45 days.

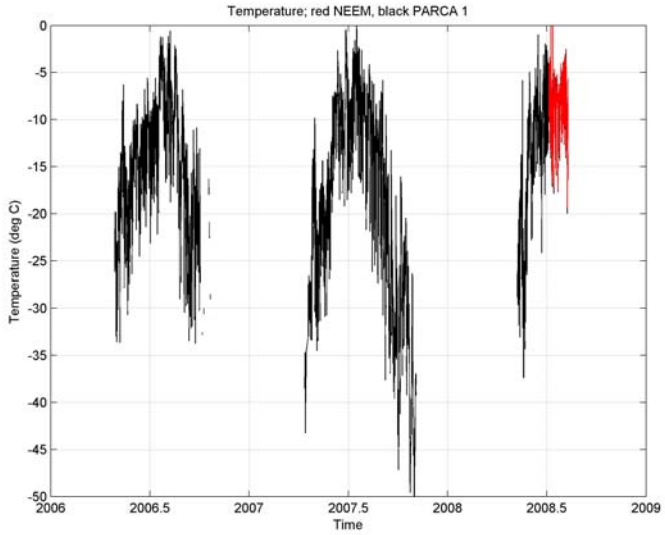


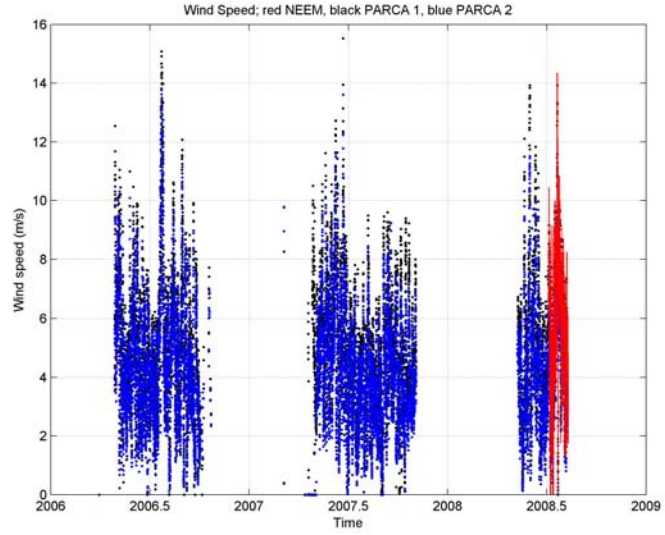


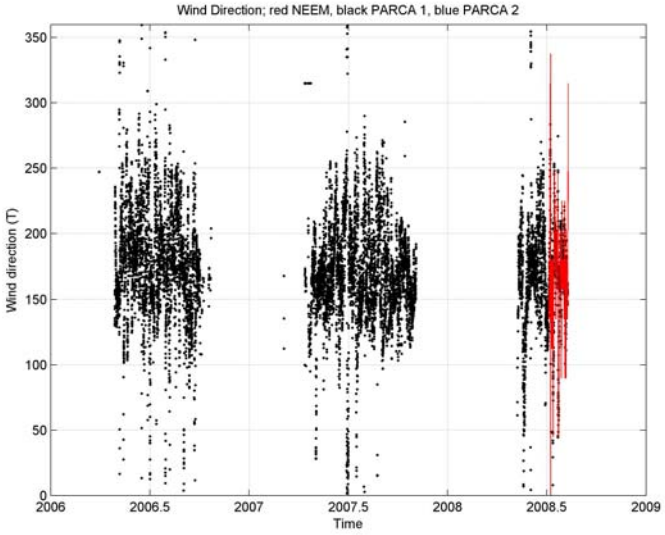


The temperature data are logged in the lines coded 222 in the 7th column. The wind speeds are logged in the lines coded 222 in the 11th and 12th columns and the corresponding wind direction (magnetic) are logged ii the lines coded 222 in the 13th and 14th column.

If my assumptions are correct the PARCA weatherstation contains data from 2006 to 2008 as shown below:


Temperature; red NEEM, black PARCA 1
Temperature (deg C)
0
-5
-10
-15
-20
-25
-30
-35
-40
-45
-50
2006
2006.5
2007
2007.5
2008
2008.5
2009
Time

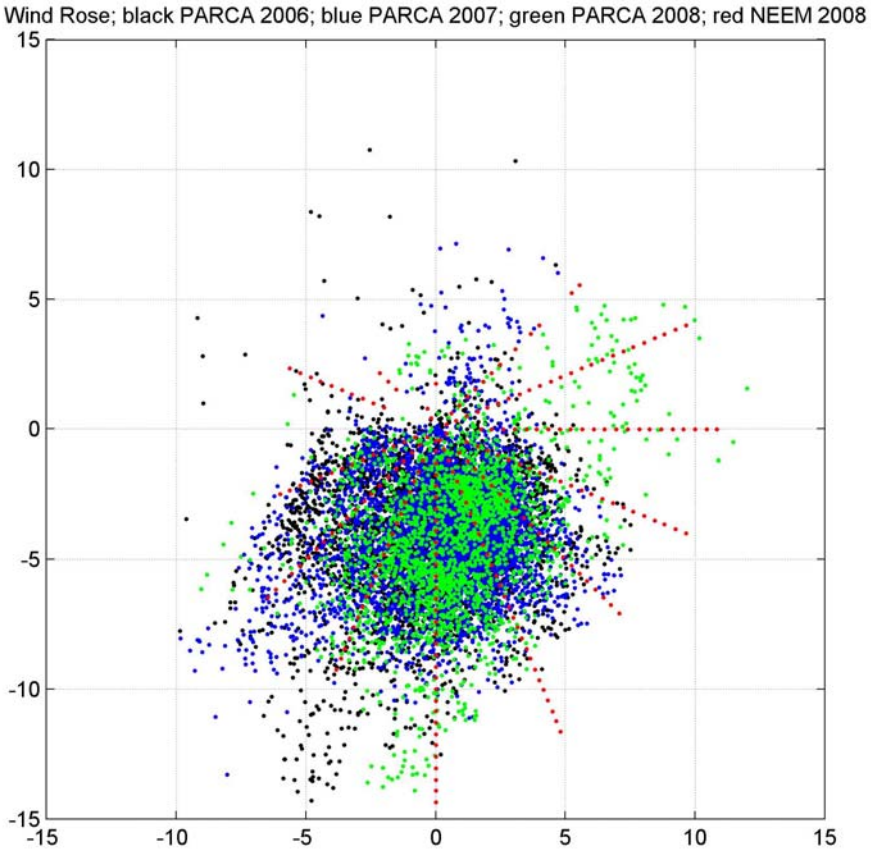

Wind Speed; red NEEM, black PARCA 1, blue PARCA 2
Wind speed (m/s)
16
14
12
10
8
6
4
2
0
2006
2006.5
2007
2007.5
2008
2008.5
2009
Time


Wind Direction; red NEEM, black PARCA 1, blue PARCA 2
Wind direction (T)
350
300
250
200
150
100
50
0
2006
2006.5
2007
2007.5
2008
2008.5
2009
Time

The weather station has not collected data during the winters.

An interesting aspect for us is the wind speed and direction both for flight operation but certainly also for interpretation of the climatic parameters we observe in the ice core.

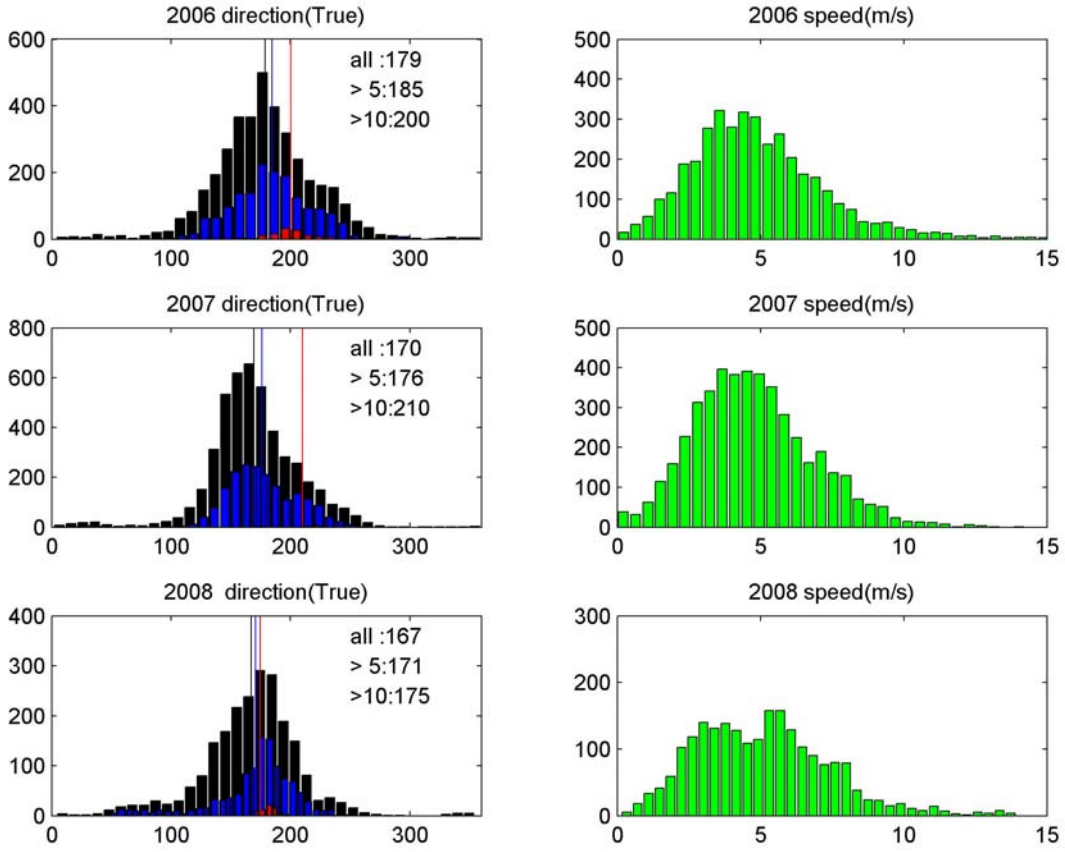
A wind rose shows that the wind directions have been the same during the 3 years



In the wind rose speeds are in m/s and directions in True degrees. It can be seen that the prevailing wind direction is around 180T with a tendency to turn to the west when the winds are strong. The NEEM data are not easily plotted this way because there only are 16 directions. It is thus not possible to see the frequency of the directions because they are just plotted on top of each other.

I have tried to make some statistics on the directions by drawing 3 data sets out for the 3 years observed. For each of the years I have made histograms of all the data, the data where the wind speed has been stronger than 5 m/s and finally the data where the wind has been stronger than 10m/s.

It can be noted that when the winds are stronger than 10 m/s the skiers rarely land in the camp.



It can be seen from the histograms that the mean wind direction through the summer months has been between 167T and 179T. When the wind is strong the direction changes slightly to the west. This is not so pronounced in 2008 mainly because there has been strong winds from many different directions. It can also be noted that 2008 has been a windy year (as we know…)

Finally it must be noted that the results here are not in accordance with the plots in our field report where it is concluded that the mean wind direction is 132True. I have checked, double checked used 2 data sets and I have had a look on the drifts in camp. I will attach the original data for you all to check too?? But – well - if I am right the skyway is placed in a 45 deg angle to the prevailing wind direction.

Dorthe, 9 August 2008