



Initial results from the STAR surface mesonet.

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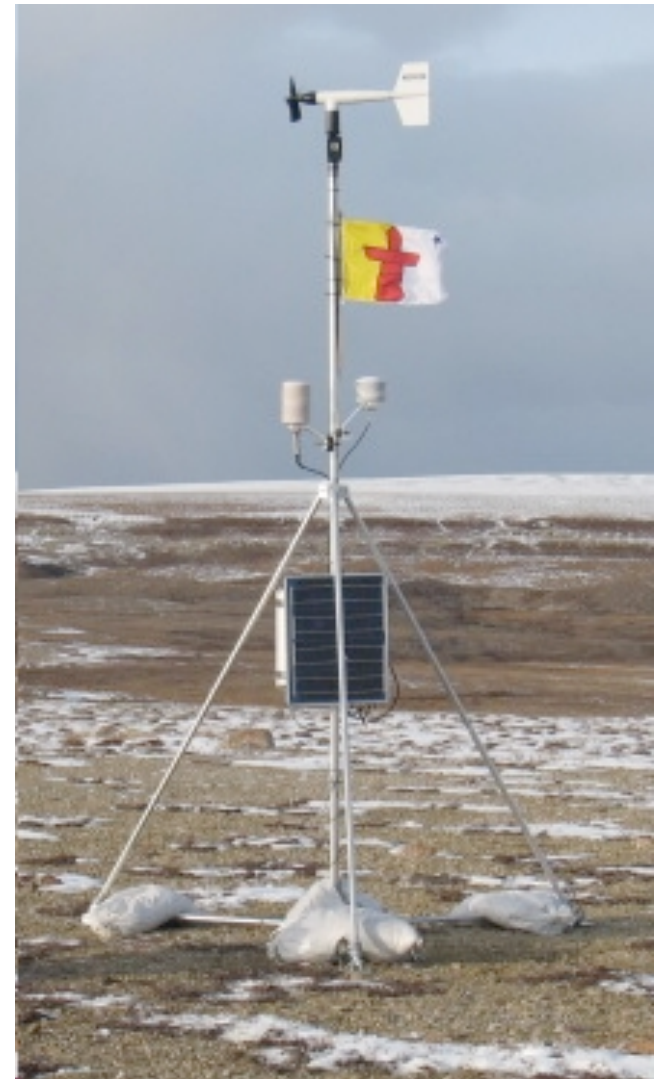
STAR project 2007/8 - Iqaluit



STAR mesonet stations



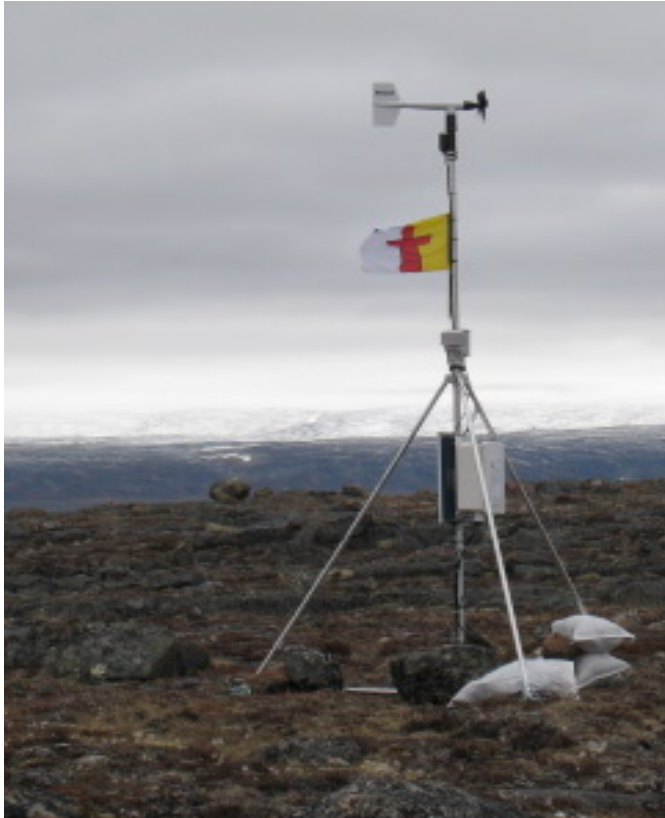
Distance A3 to M4 is about 120 km.



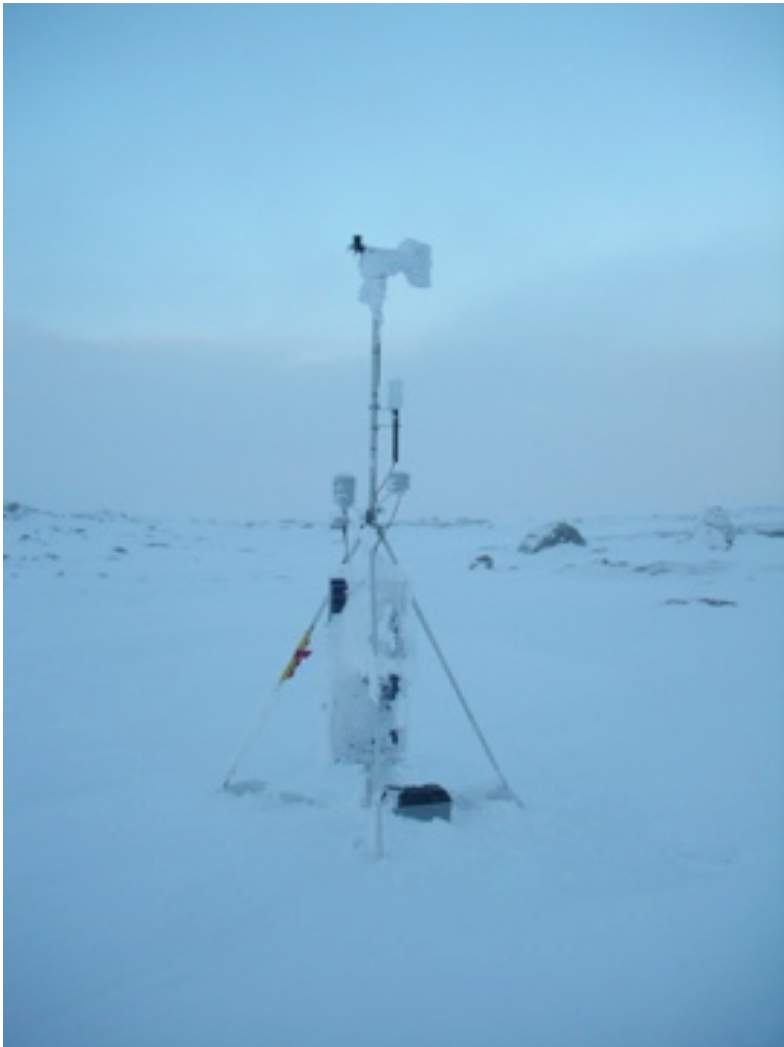
The Tower locations and elevations

| Station | Lat. N | Long. W | Elevation (m) | Deployment Date |
|---------|-----------|-----------|---------------|-----------------|
| M1 | 63°56.382 | 68°56.595 | 199 | Sept. 24, 2007 |
| M2 | 64°06.510 | 69°19.704 | 162 | Sept. 24, 2007 |
| M3 | 64°22.087 | 69°45.130 | 188 | Sept. 26, 2007 |
| M4 | 64°33.862 | 70°13.942 | 135 | Sept. 26, 2007 |
| A1 | 63°17.615 | 68°01.836 | 81 | Sept. 25, 2007 |
| A3 | 63°44.874 | 68°32.611 | 18 | Sept. 28, 2007 |
| I1 | 63°12.72 | 68°24.67 | 454 | Sept. 27, 2007 |
| S1 | 63°31.416 | 69°04.794 | 721 | Sept. 25, 2007 |
| S2 | 63°57.556 | 67°51.088 | 579 | Sept. 24, 2007 |
| S4 | 63°36.284 | 67°15.492 | 564 | Sept. 25, 2007 |

Stations M1 and S1 (Iridium)



STAR - S1 Elevation 721 m – November 07

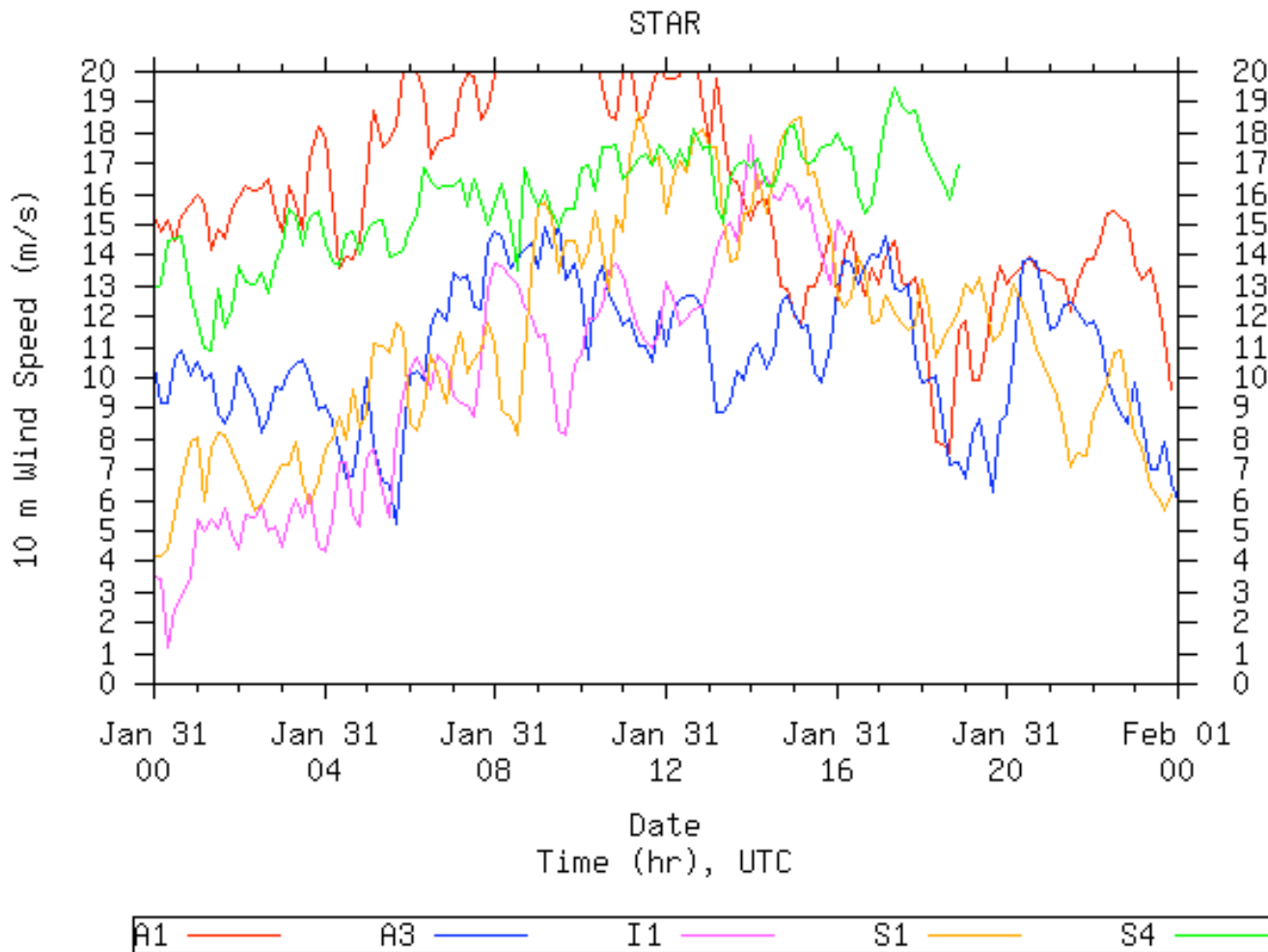


Instrumentation

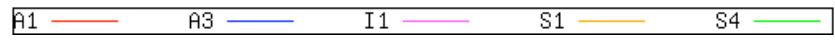
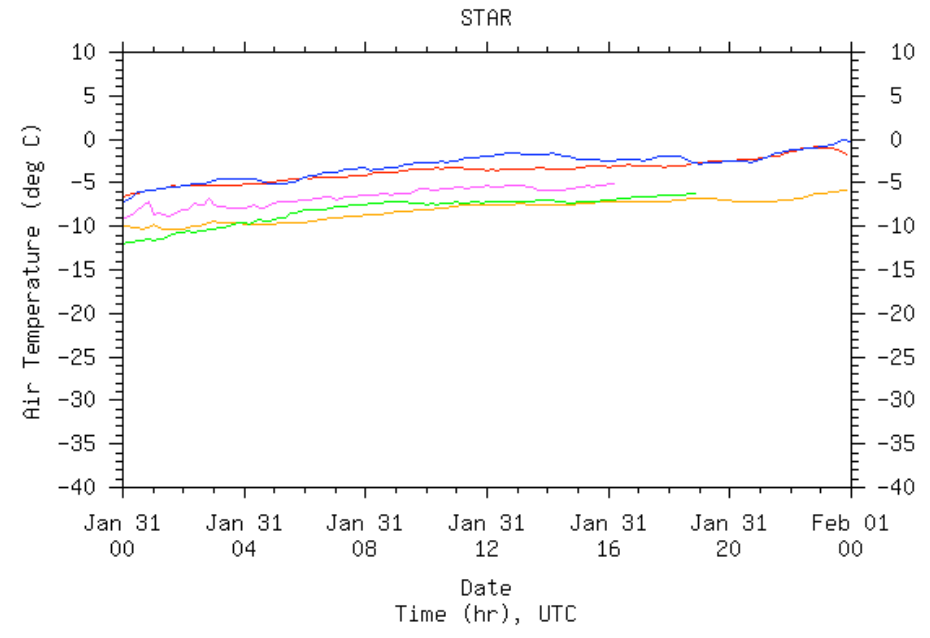
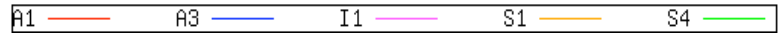
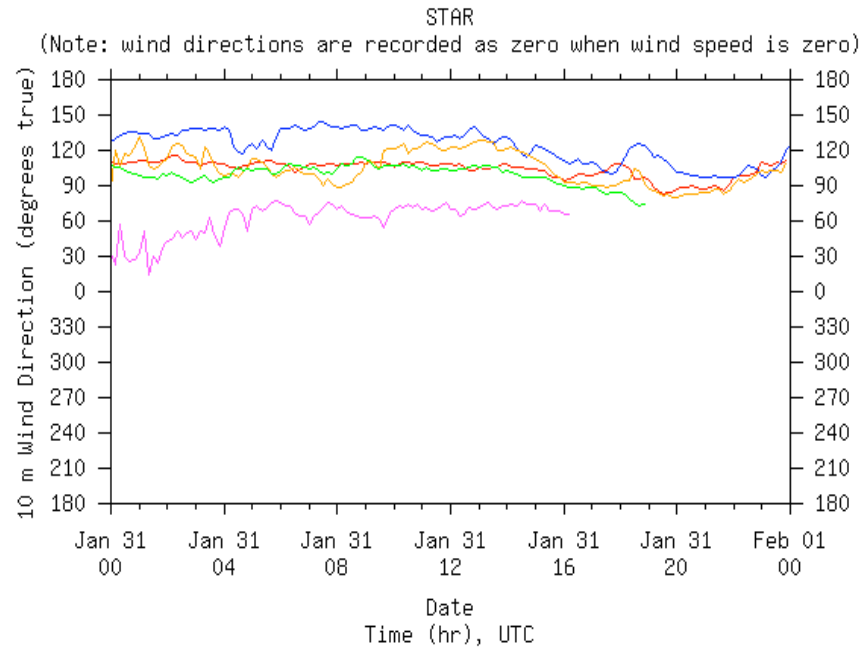
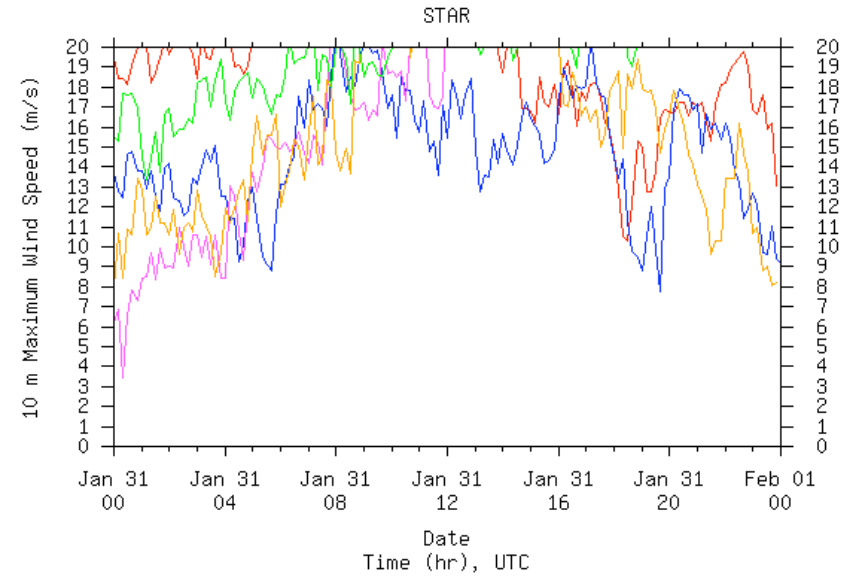
| STATION M1 | Type | S/N |
|----------------------|-----------|----------|
| Logger | CR1000 | 7740 |
| Wind Anemometer | 05103 | 71273 |
| Pressure Sensor | PTB210 | B1050006 |
| Temp/Humidity Sensor | HMP45C212 | C2075 |
| Temp Sensor | 44212 | C1506 |

| STATION S1 | Type | S/N |
|---------------------------------|---------------------|----------|
| Logger | CR1000 | 10788 |
| Wind Anemometer Offset = +10 | 05103-10A | 79594 |
| Pressure Sensor | PTB210 | B1050009 |
| Temp/Humidity Sensor | HMP45C212 | C2074 |
| Temp Sensor | 44212 | C1505 |
| Iridium Modem | Phone: 881621415689 | #3 |

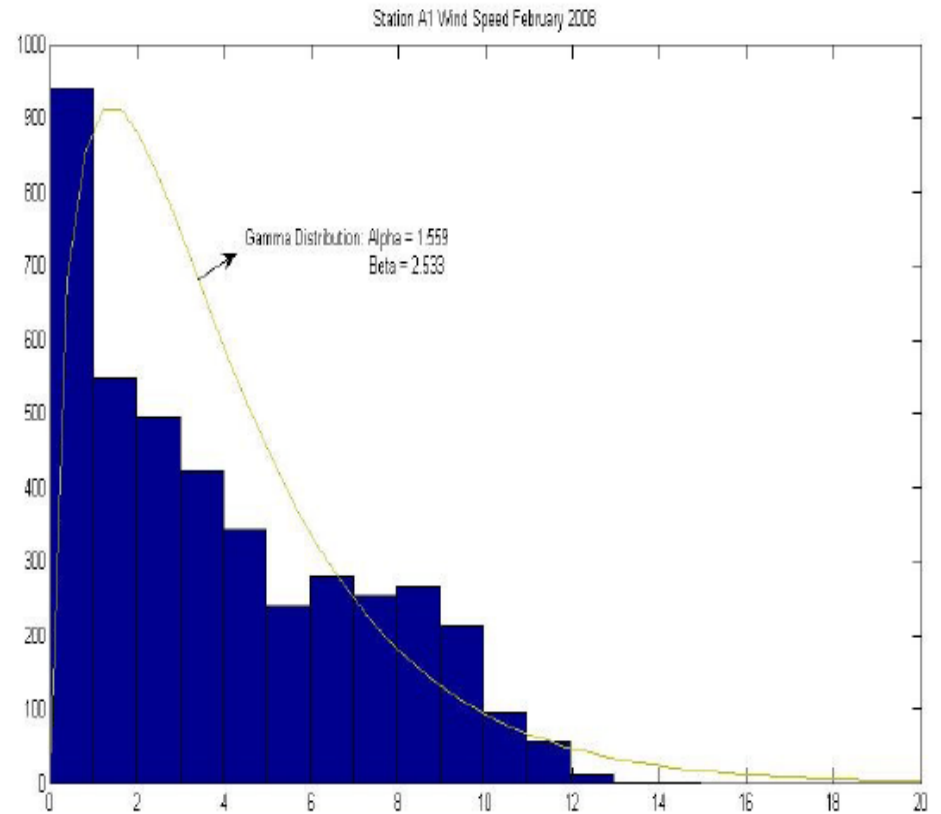
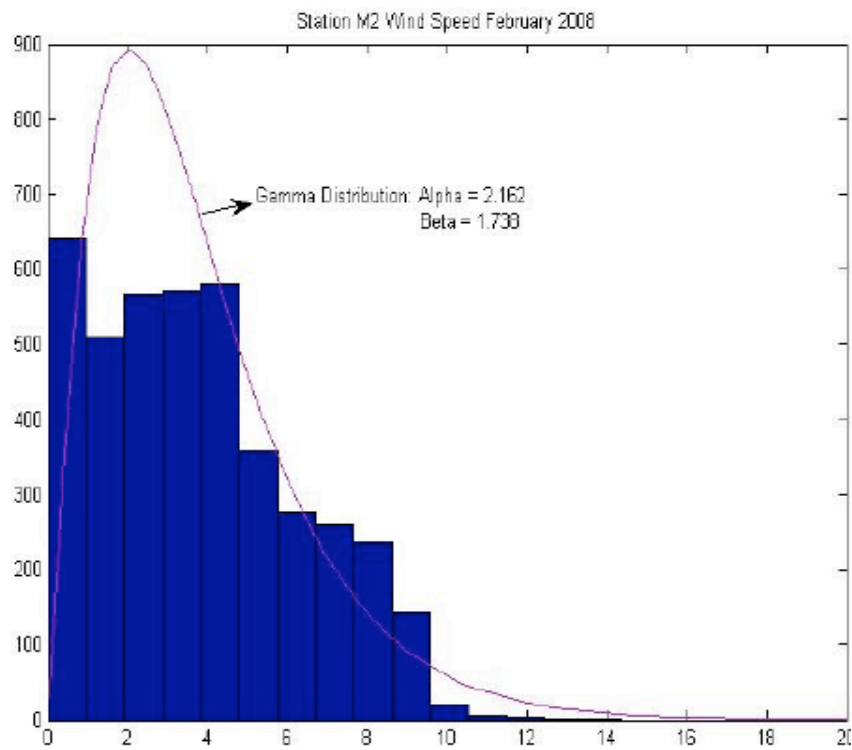
Data from satellite phone access



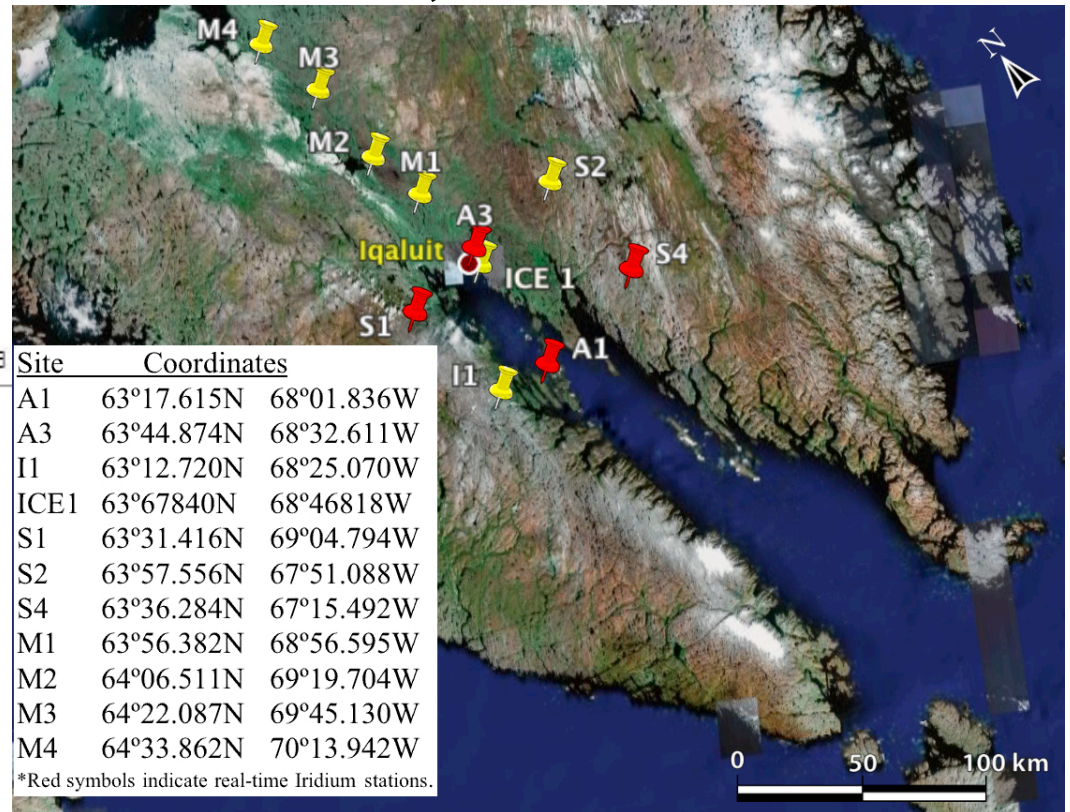
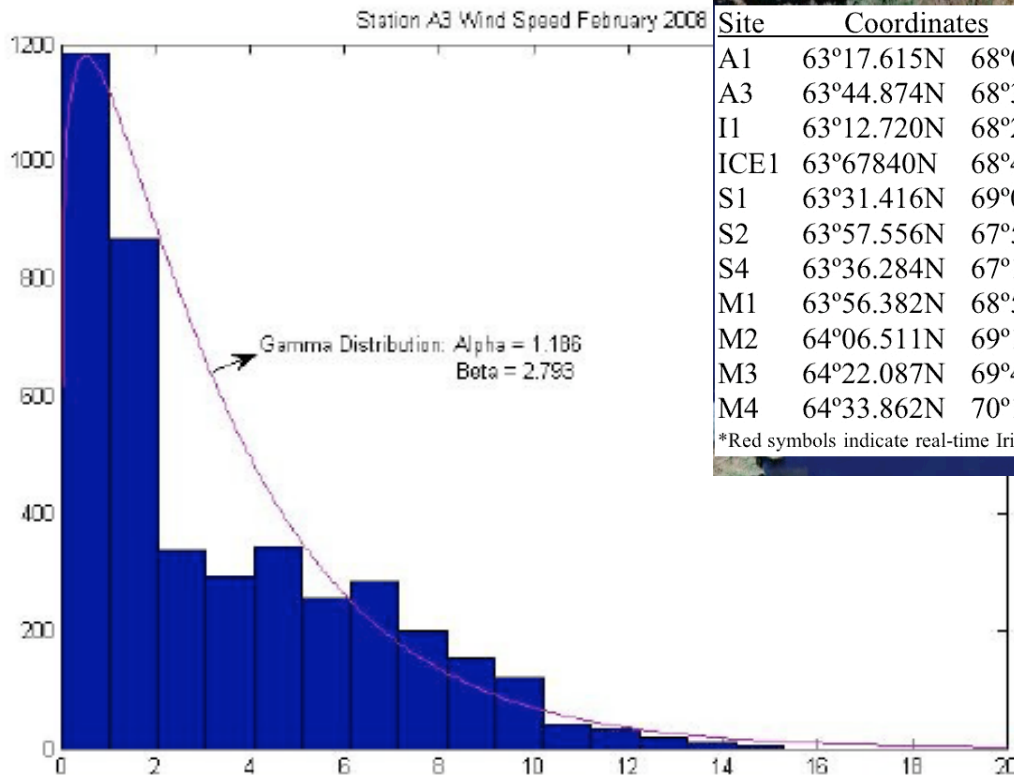
Data are still available at: <http://www.starnetwork.ca/>



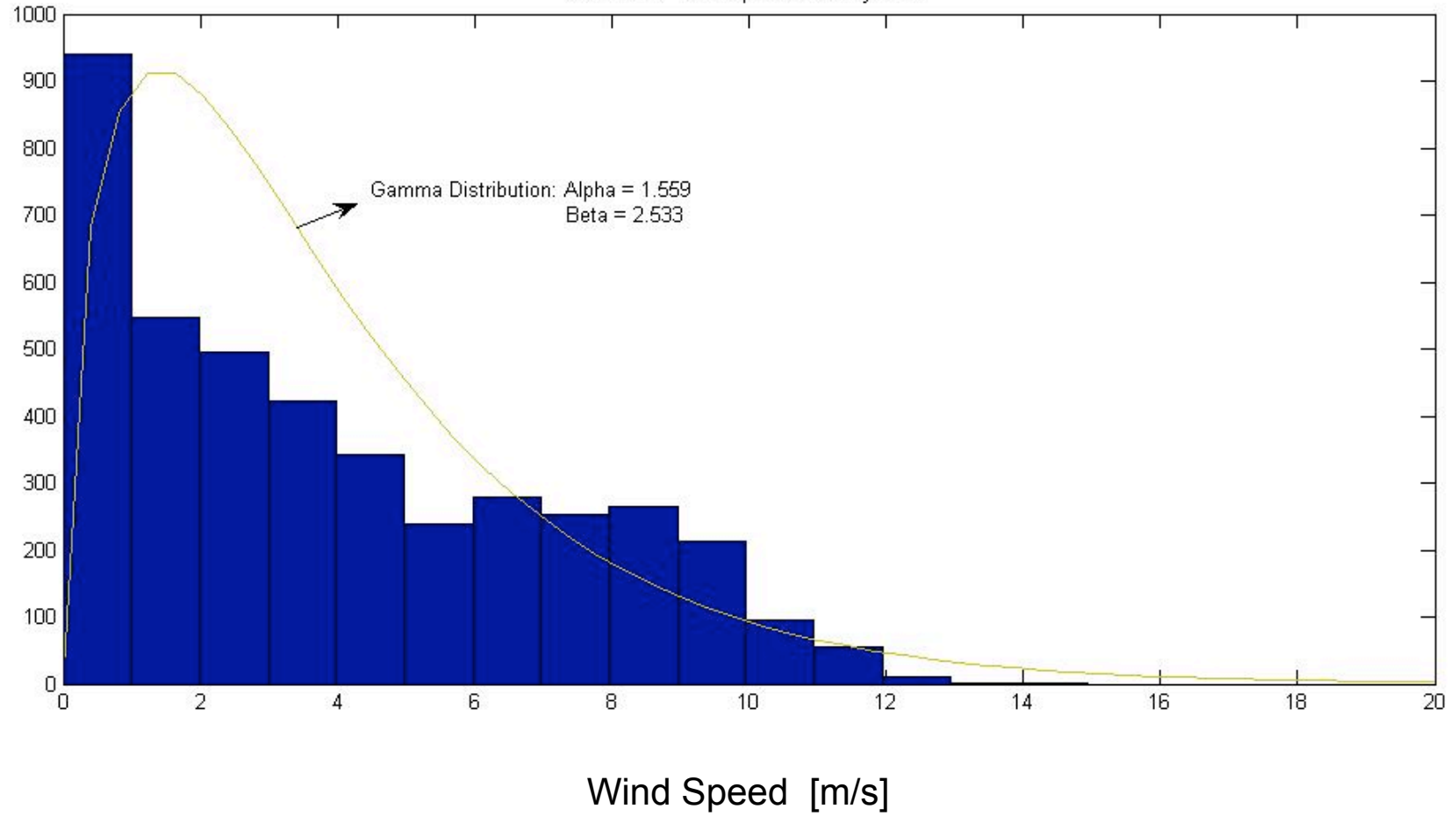
February Winds, M2 and A1



Airport Station, A3

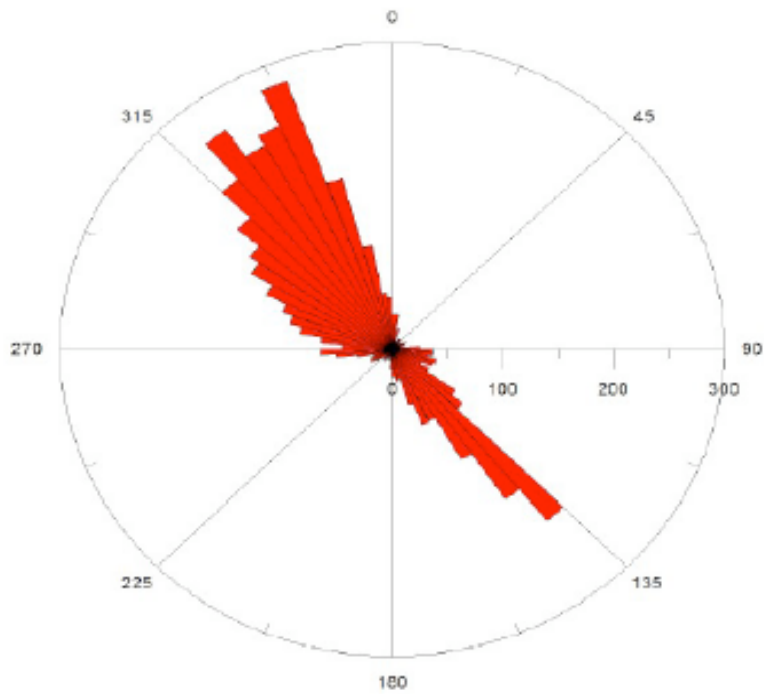


Station A1 Wind Speed February 2008

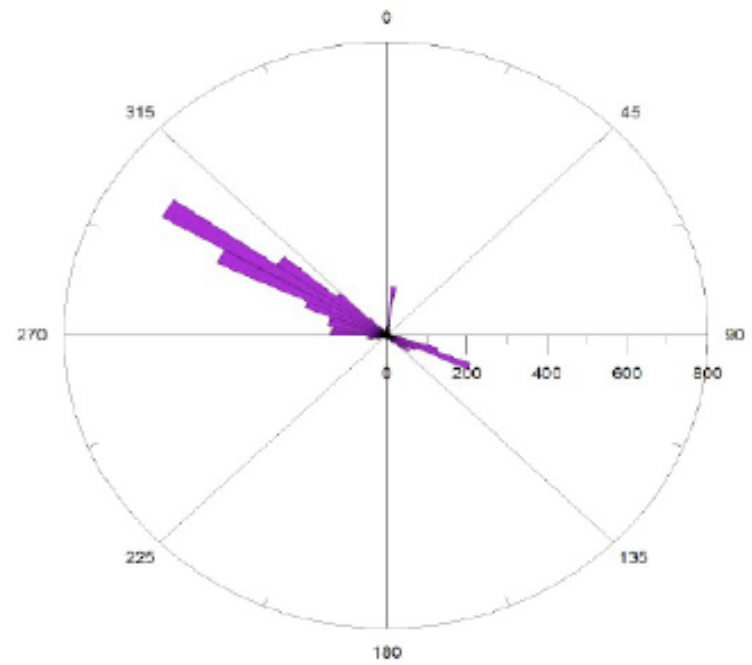


Wind directions M2 and A1 – October 2007

Wind direction for the month of October 2007
M2 Station

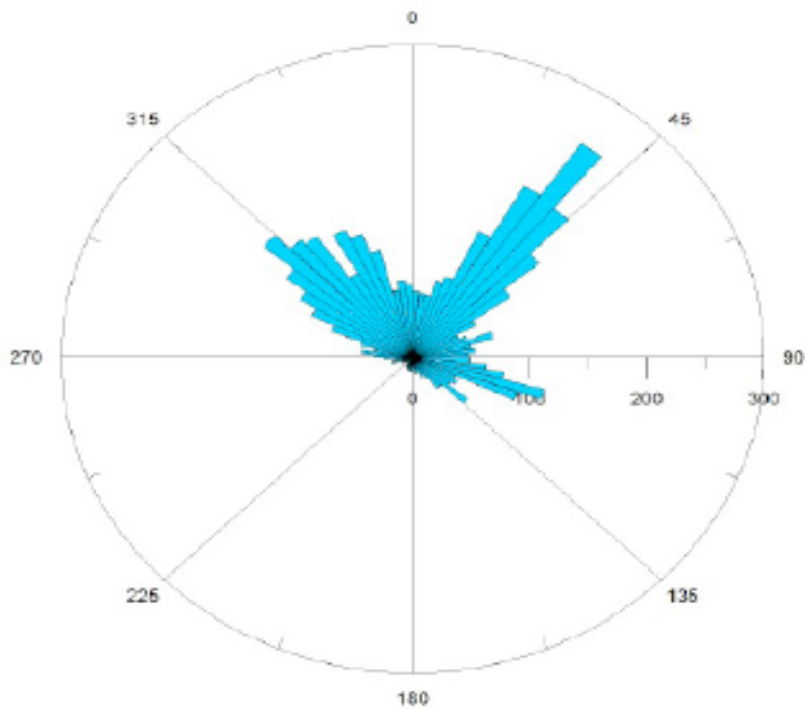


Wind direction for the month of October 2007
A1 Station

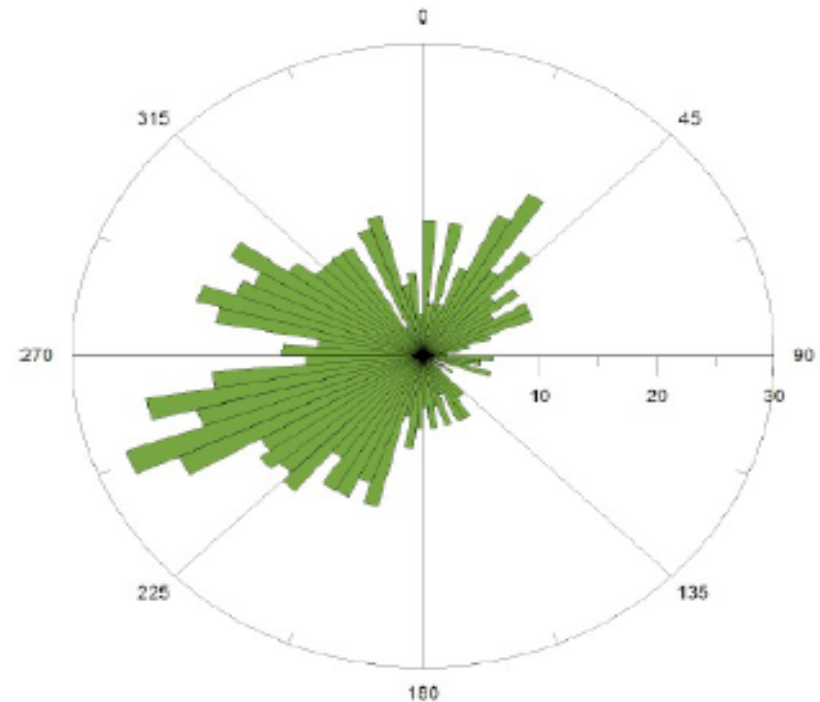


Wind directions S4 and I1 – October 2007 (across Frobisher Bay)

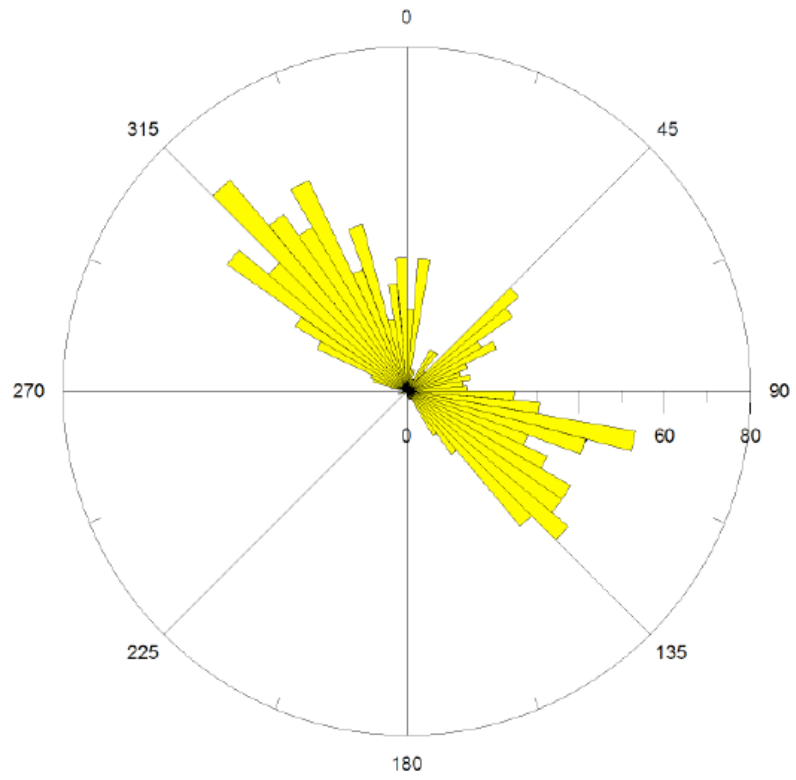
Wind direction for the month of October 2007
S4 Station



Wind direction for the month of October 2007
INAC Station



Wind direction for the month of October 2007
A3 Station

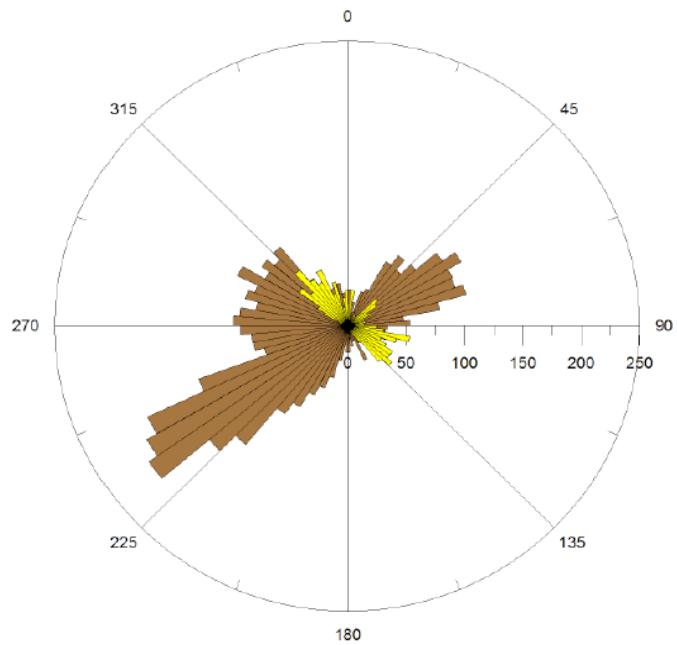


Wind Directions, M3 and M4 compared to A3

Wind direction for the month of October 2007

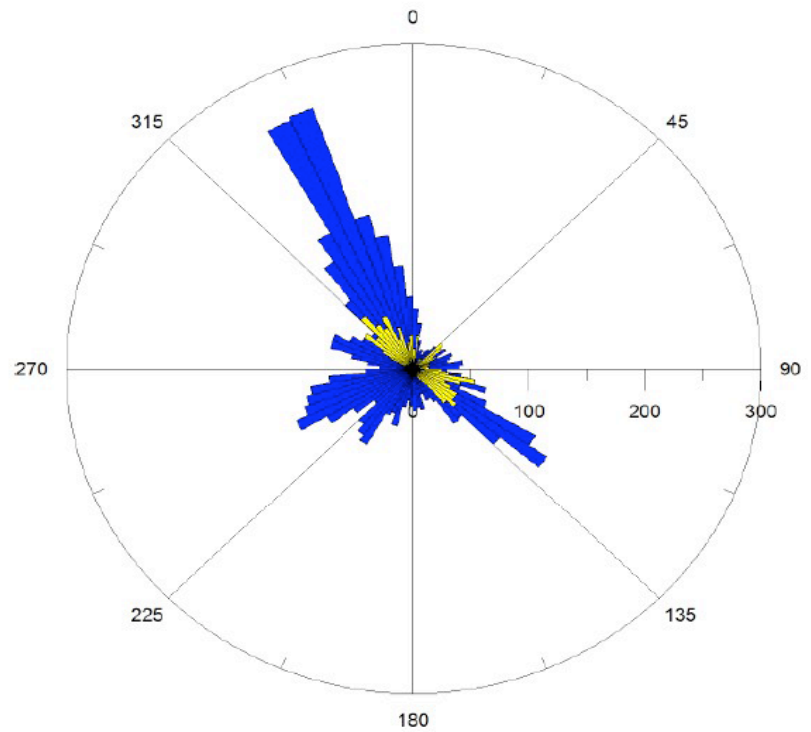
M3 Station
A3 Station

Units are Degrees [Deg]

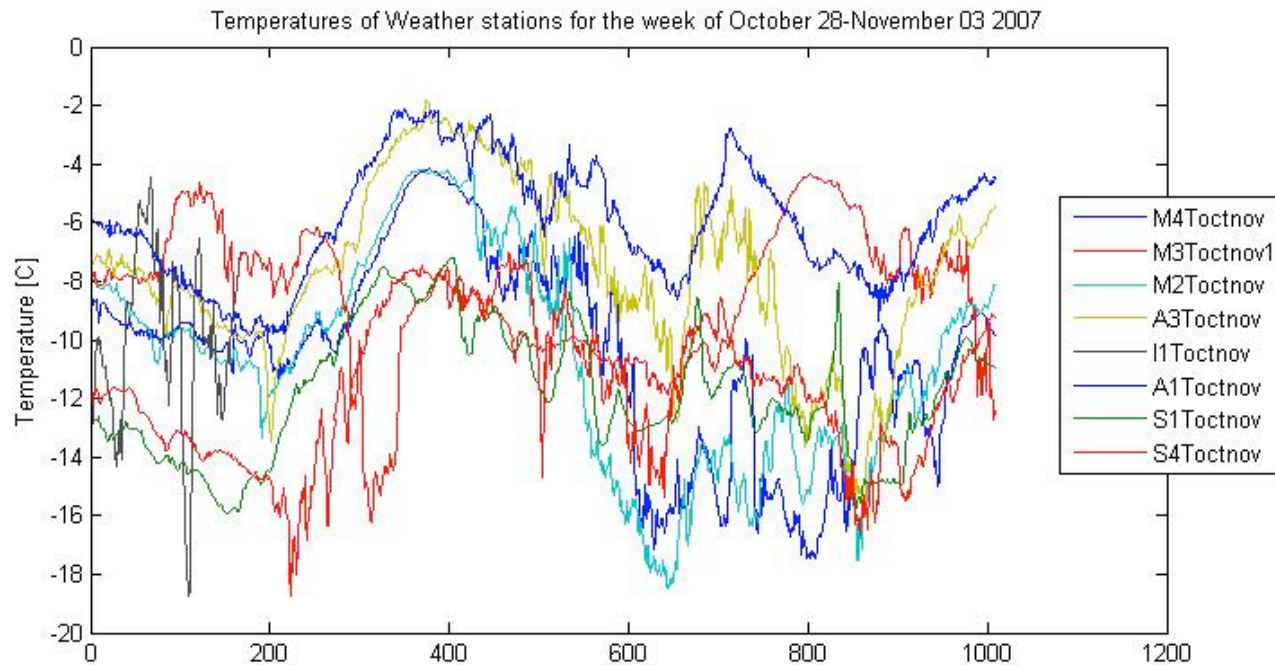


Wind direction for the month of October 2007

M4 Station
A3 Station



All stations without M1



Number of 10 min records: Total $7 \times 24 \times 6 = 1008$

Conclusions

- Extensive data set. Lost most M1 data (except p) to Arctic Foxes, lost some S1 data to ice and most S2 data to logger problems but plenty of data to look over.
- February was a calmer month than expected, but some good storms with interesting wind channeling in October and January.
- Need more time for quality control and analyses!