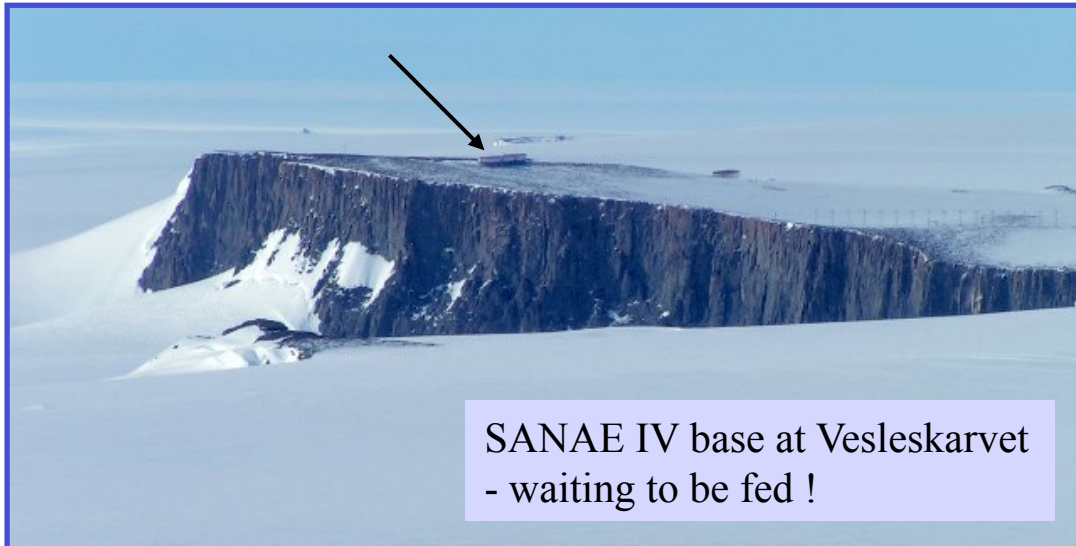


# MARITIME SERVICES IN ANTARCTICA

## International Cooperation



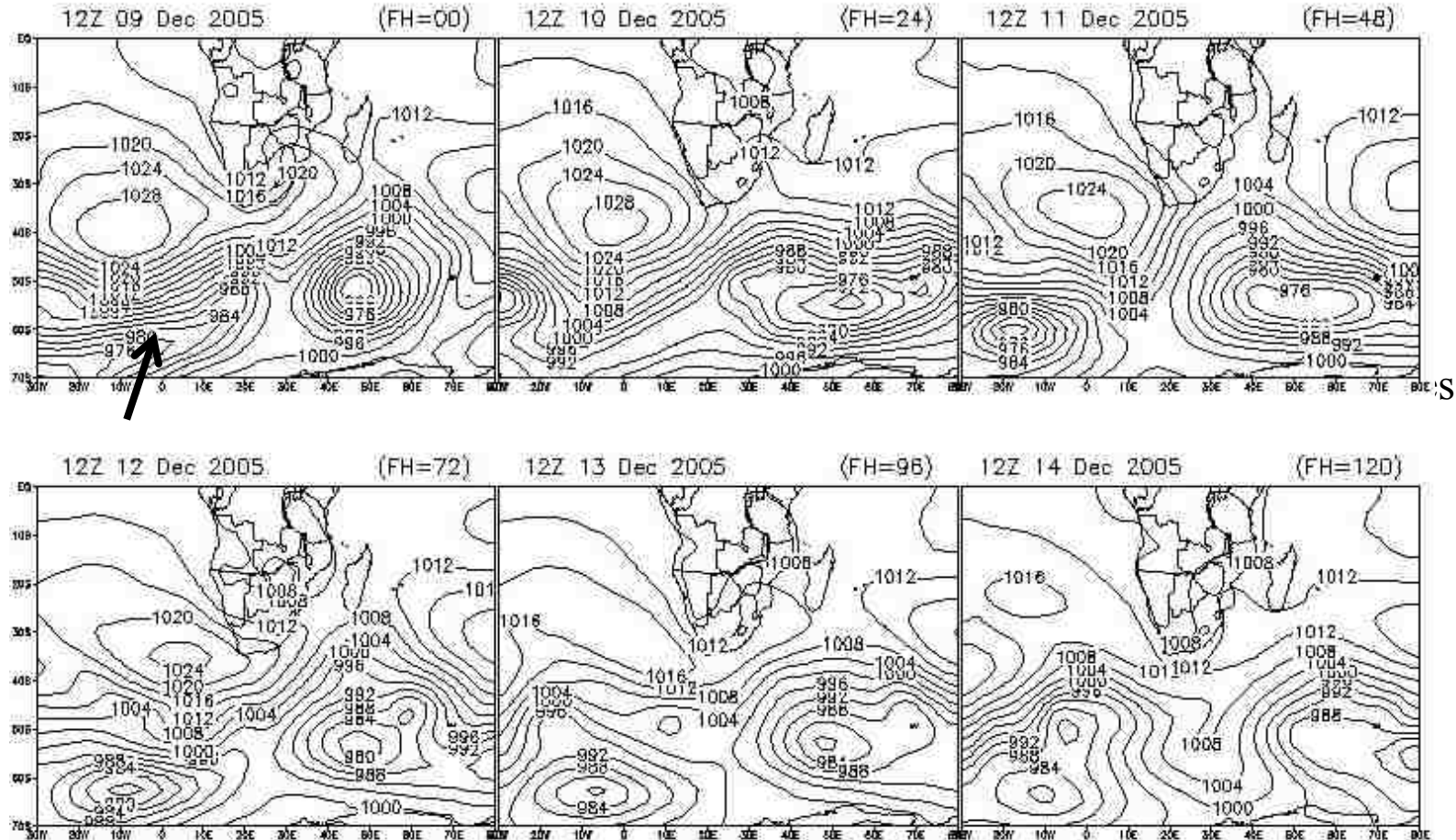
**2005/ 6**  
**Annual Relief**  
**Voyage to SANAE**

**NEEDED**

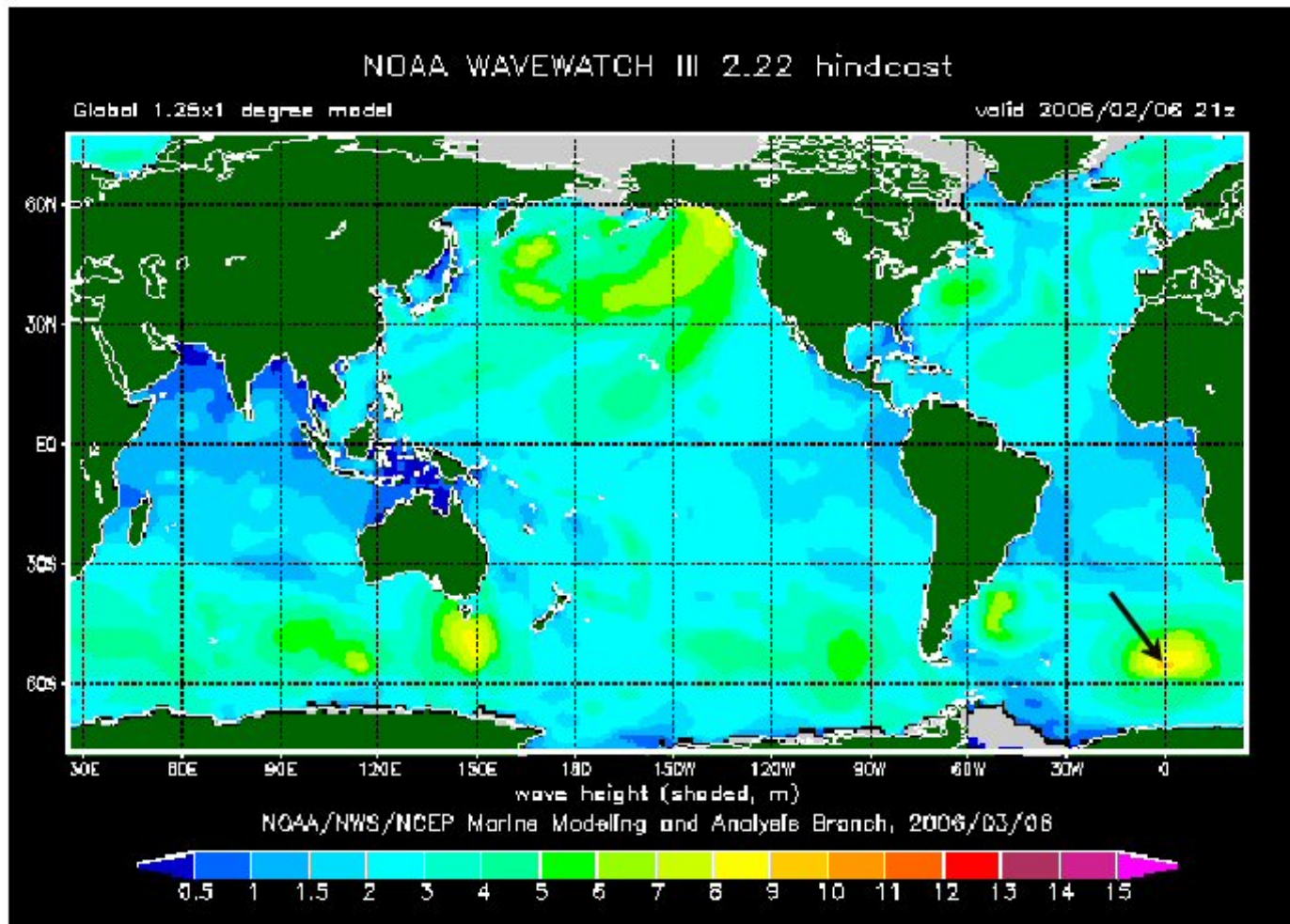
Analyses/predictions :

- winds and waves
- sea ice
- visibility
- precipitation
- shelf ice (waves)

## 5-day sea level pressure predictions from NCEP's Global Forecast System



Sea level pressure prognostics -> winds -> waves



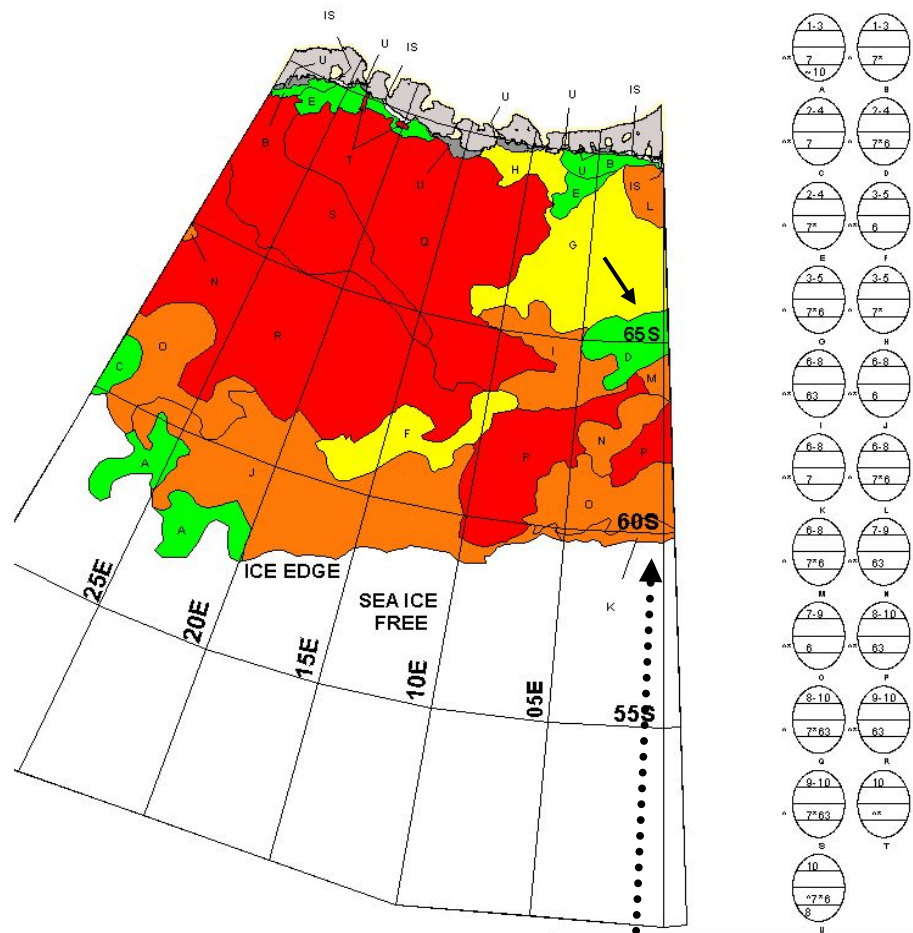
'SA Agulhas' headed south



Photo :  
Johan van der Merwe

“Furious fifties”.....





IS=ICE SHELF

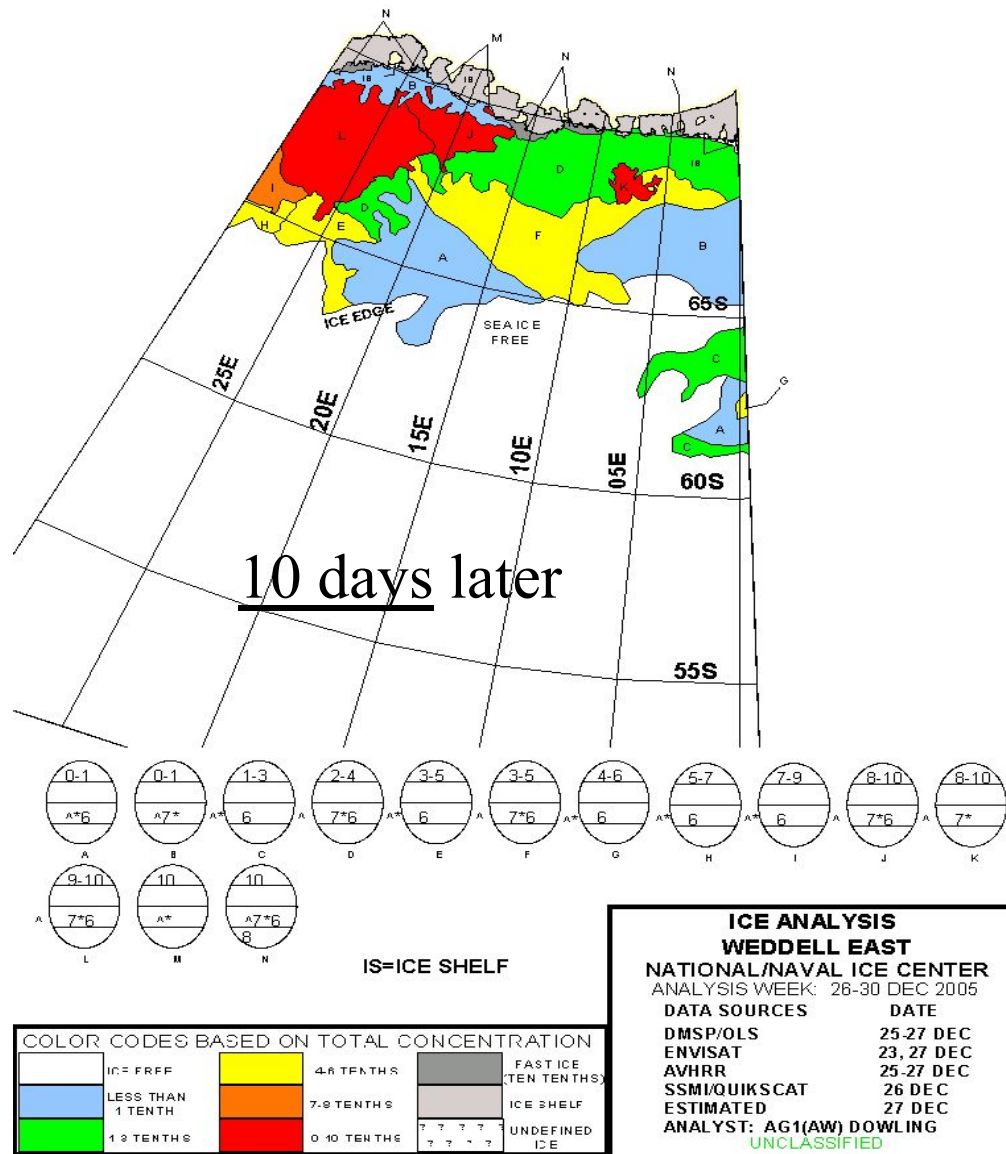
COLOR CODES BASED ON TOTAL CONCENTRATION			
ICF FREE	4.8 TENTHS	FAST ICE (TEN TENTHS)	
LESS THAN 1 TENTH	7.9 TENTHS	ICE SHELF	
1.3 TENTHS	0.13 TENTHS	UNDEFINED ICE	

**ICE ANALYSIS  
WEDDELL EAST  
NATIONAL/NAVAL ICE CENTER**

ANALYSIS WEEK: 12-16 DEC 2005

DATA SOURCES	DATE
DMSP/OLS	10-12 DEC
ENVISAT	12 DEC
SSM/QUIKSCAT	11 DEC

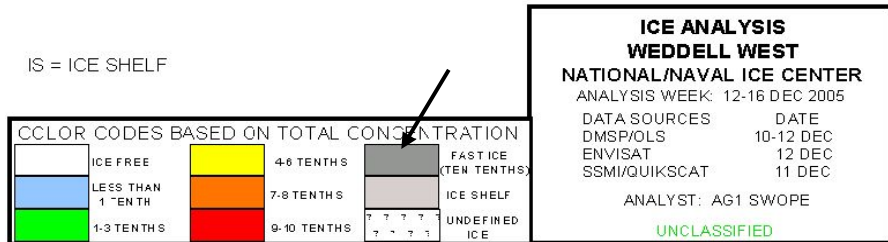
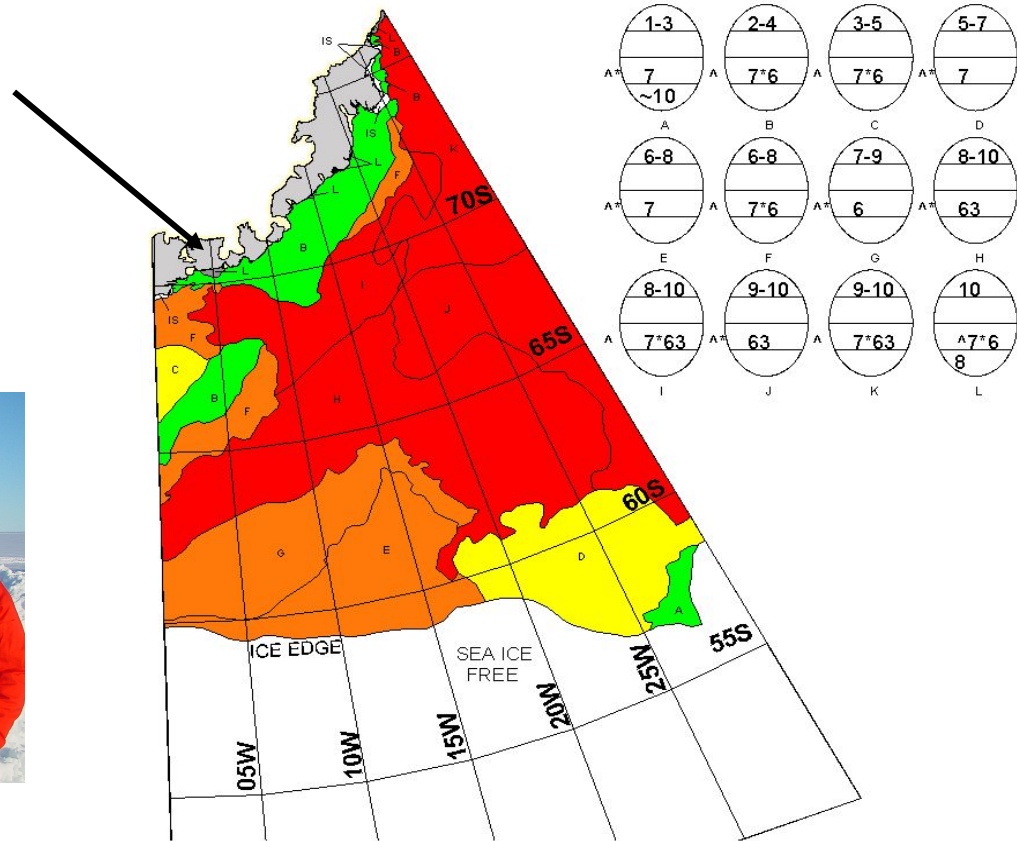
ANALYST: AG1 SWOPE  
UNCLASSIFIED



Fast ice - ship beset  
(headed for Atka Bay  
Neumeyer Base)



Last of the Cape wine....

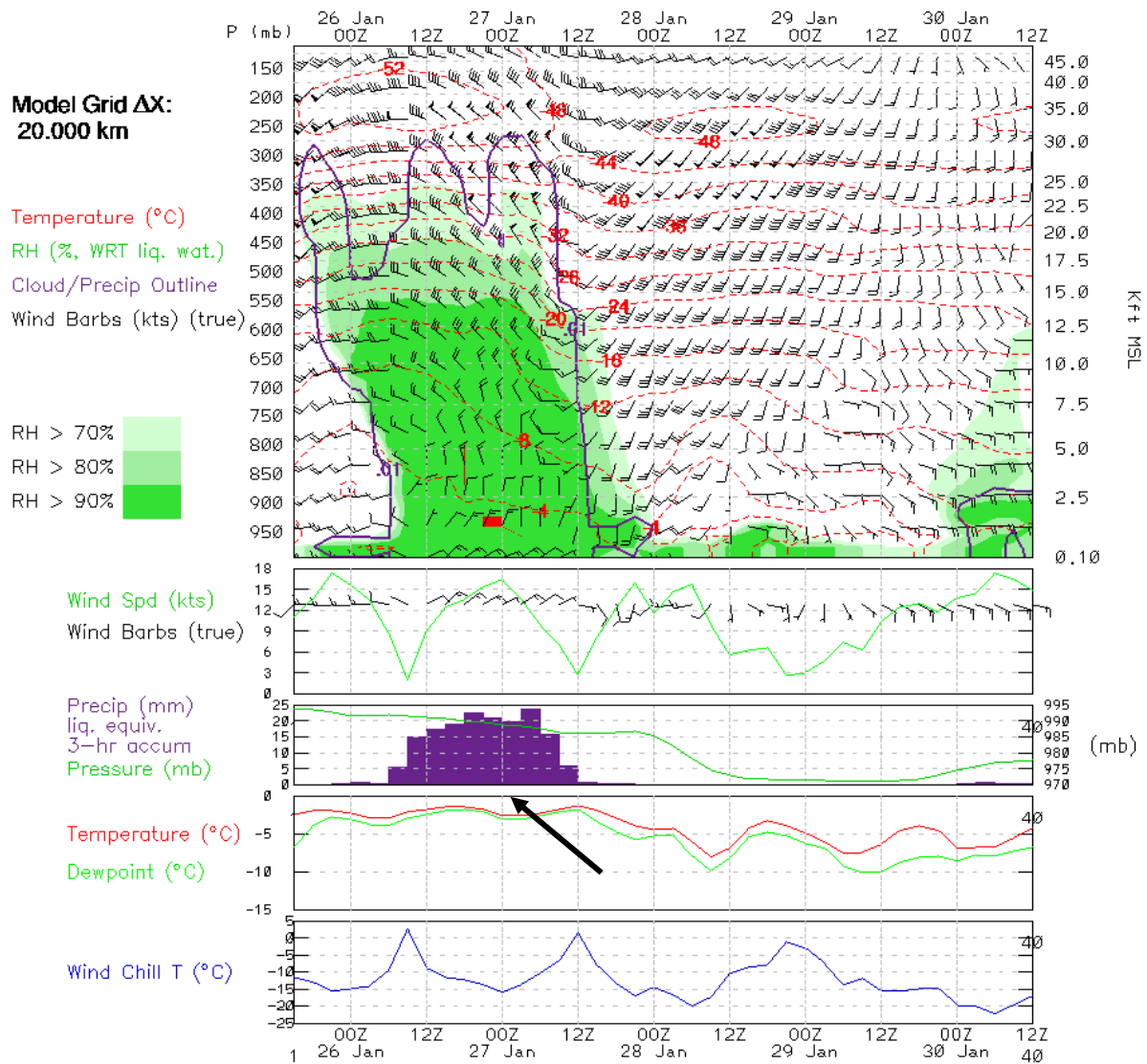


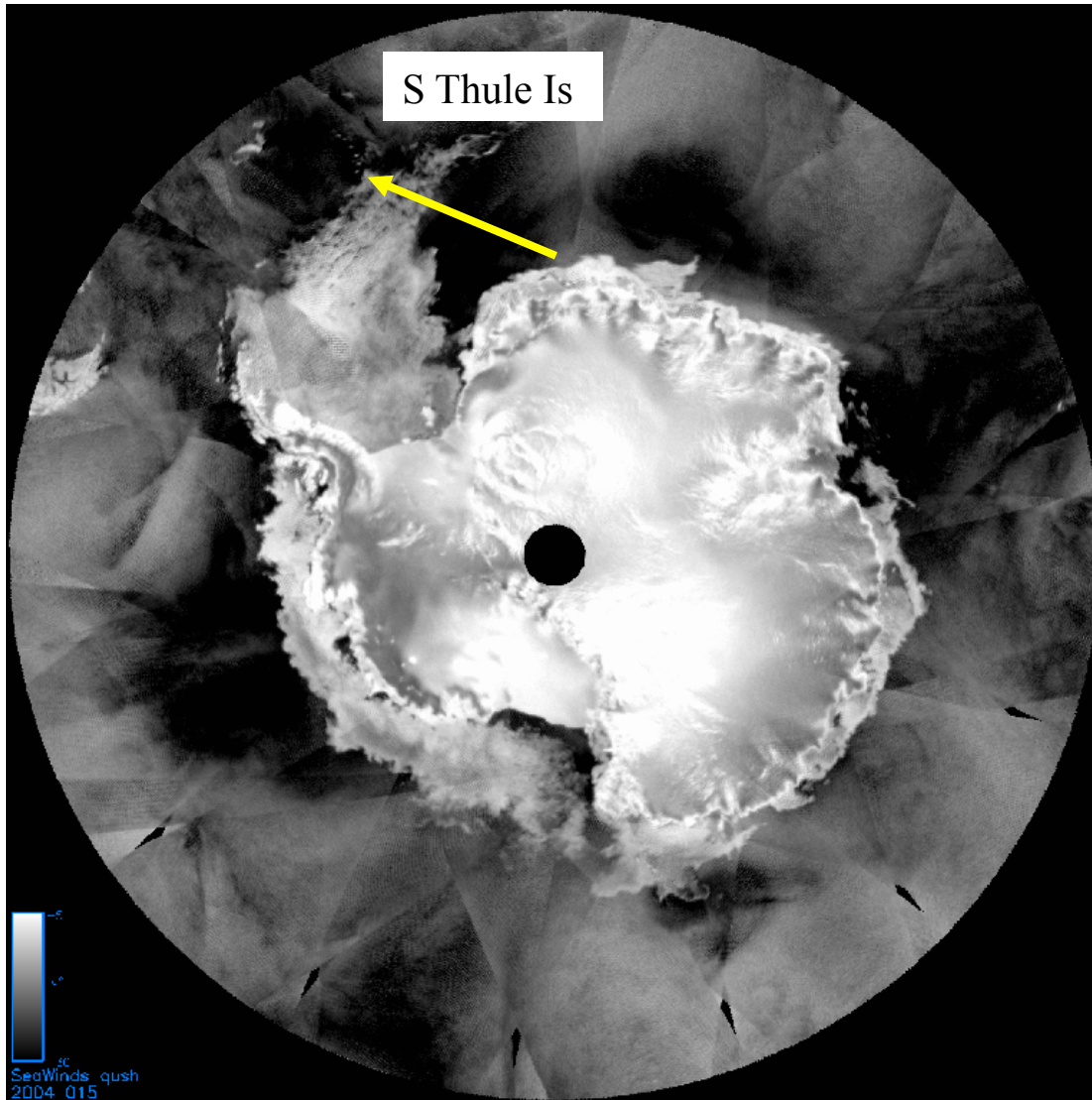


Heavy snow  
at Penguin  
Bukta.

Flying  
suspended

Sanae: lat/lon = (-70.28, -2.83) AMPS MM5 Forecast Cycle:  
2006-01-25 / 12 Z

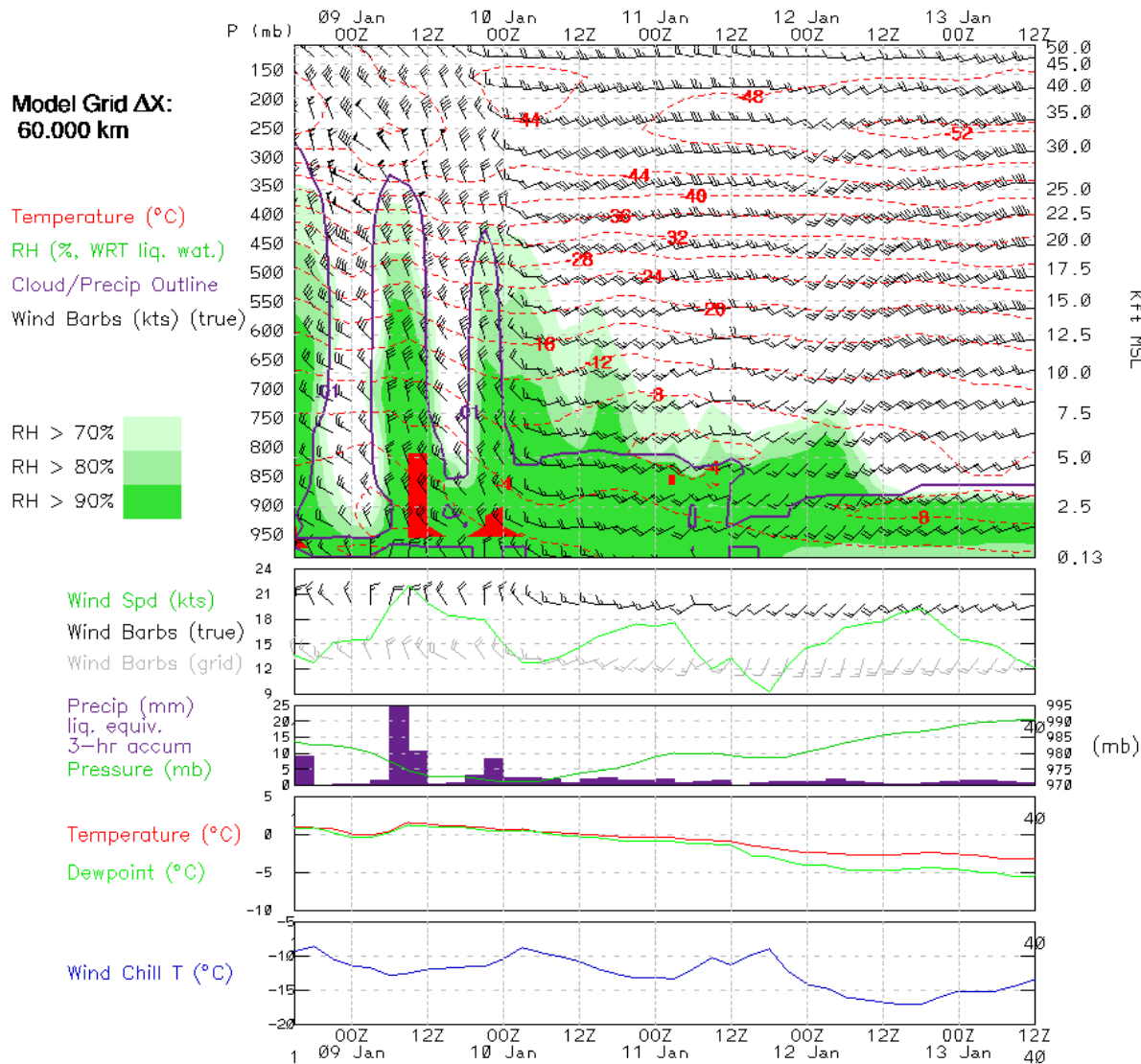


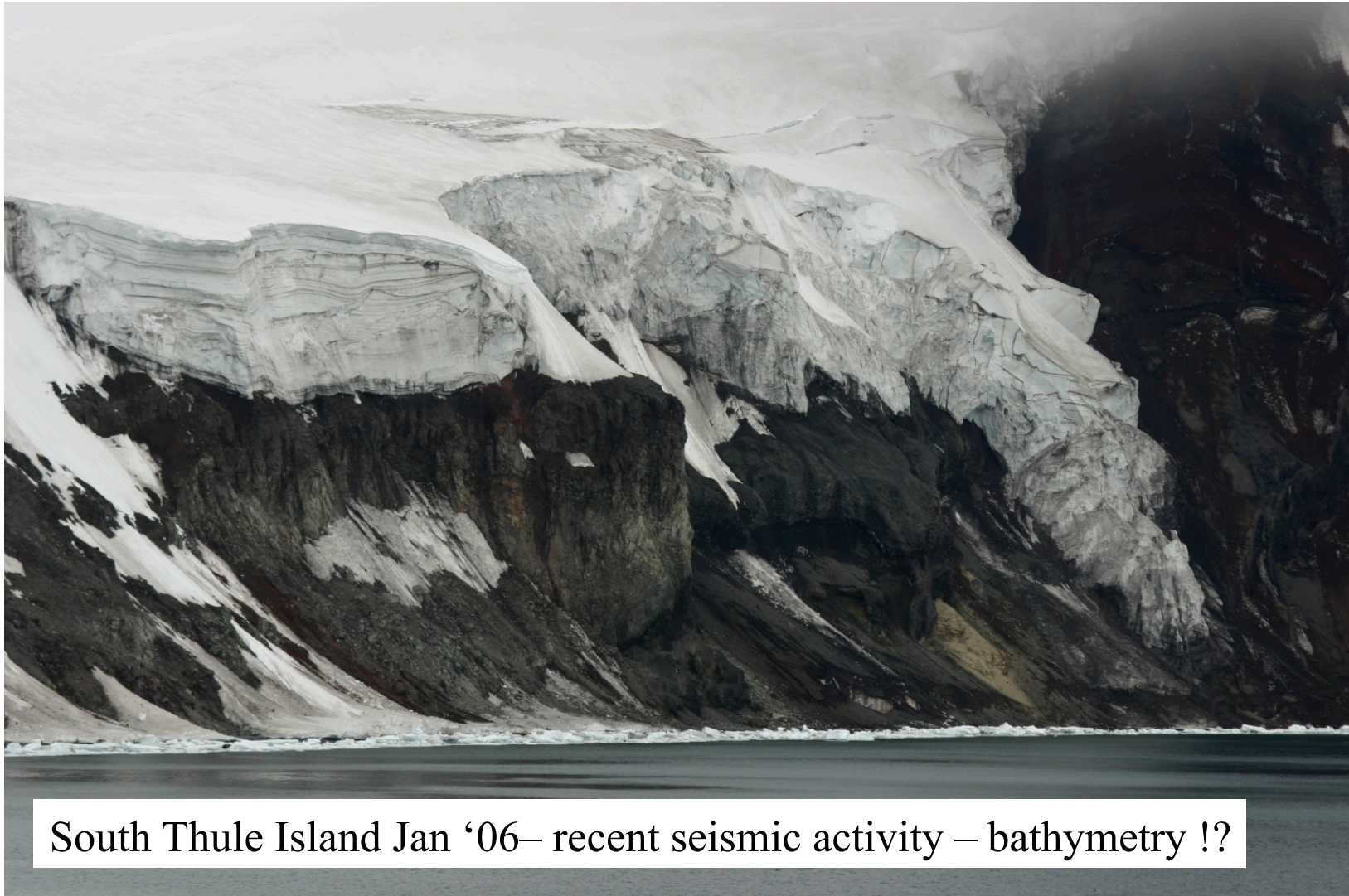


“buoy run”

South Thule Island: lat/lon = (-59.48, -27.30)

AMPS MM5 Forecast Cycle:  
2006-01-08 / 12 Z

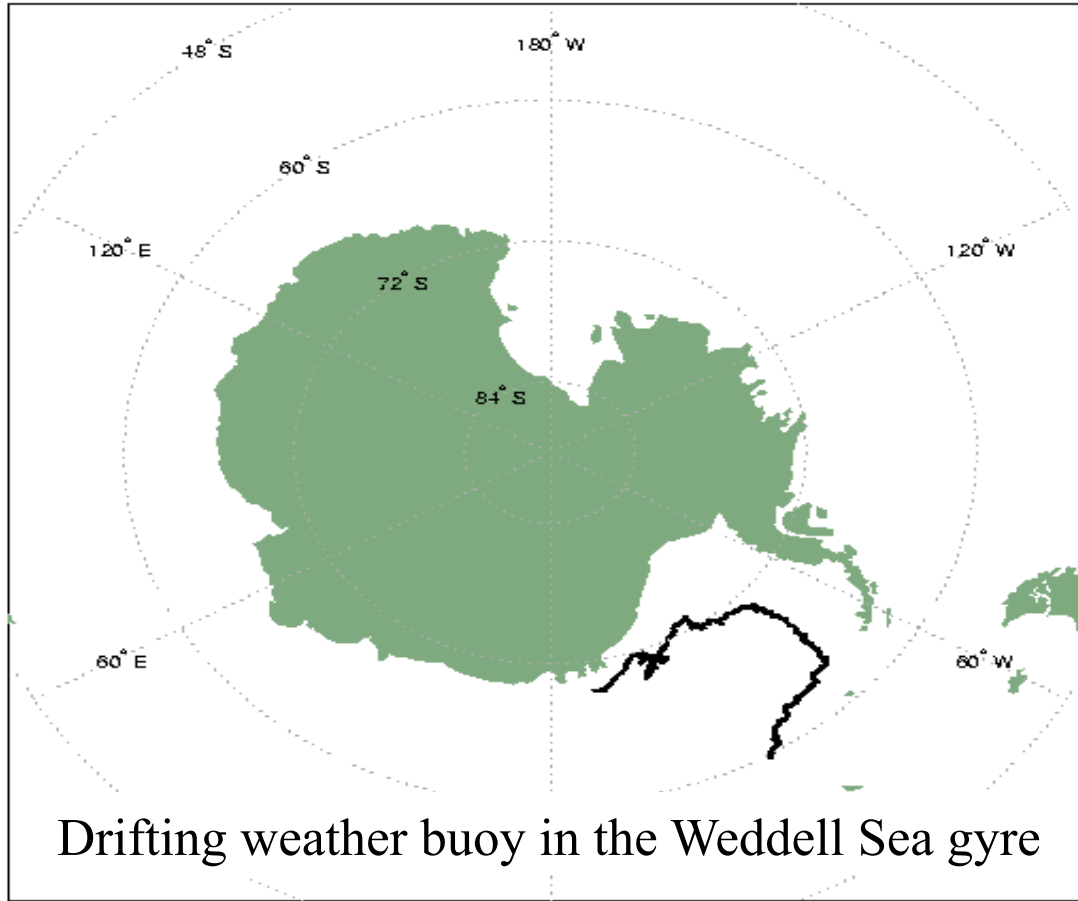




South Thule Island Jan '06— recent seismic activity – bathymetry !?



WMO #71557

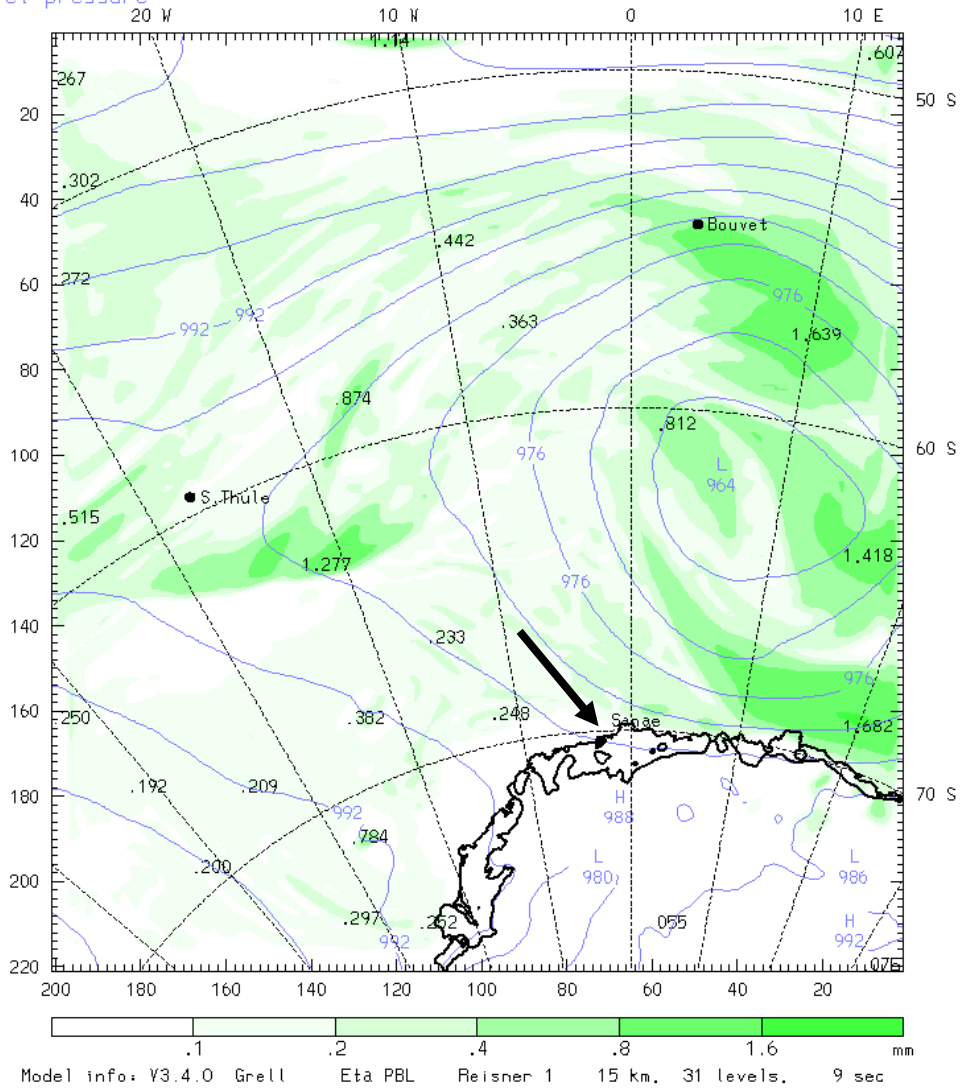


MEDS/SDMM 21-Oct-2005

— 20040427 - 20050930

AMPS 15km One-way Nest MM5  
Fcst. 24 h  
Total precip. in past 3 h  
Sea-level pressure

Init. 00 UTC Tue 31 Jan 06  
Valid. 00 UTC Wed 01 Feb 06

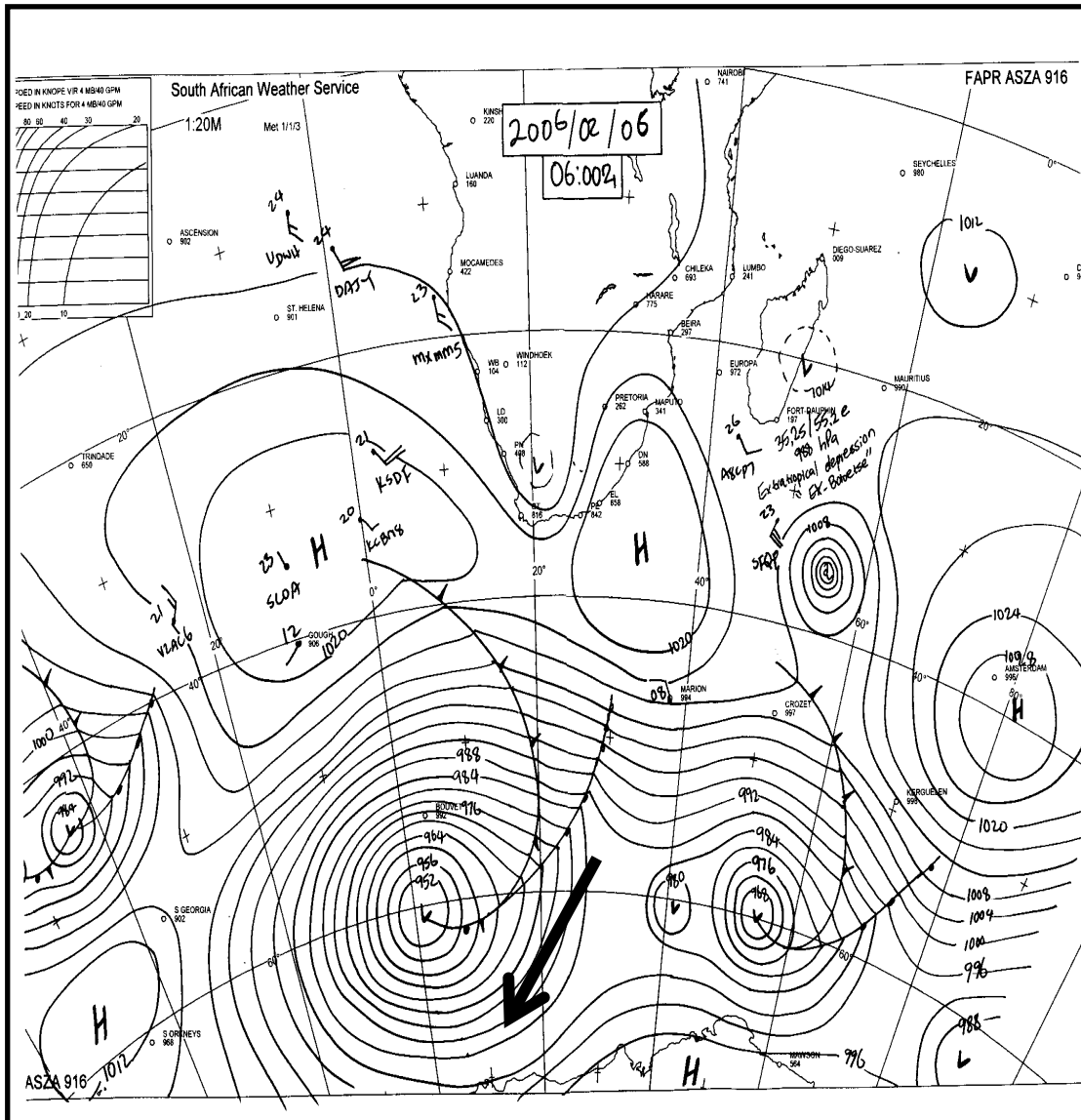


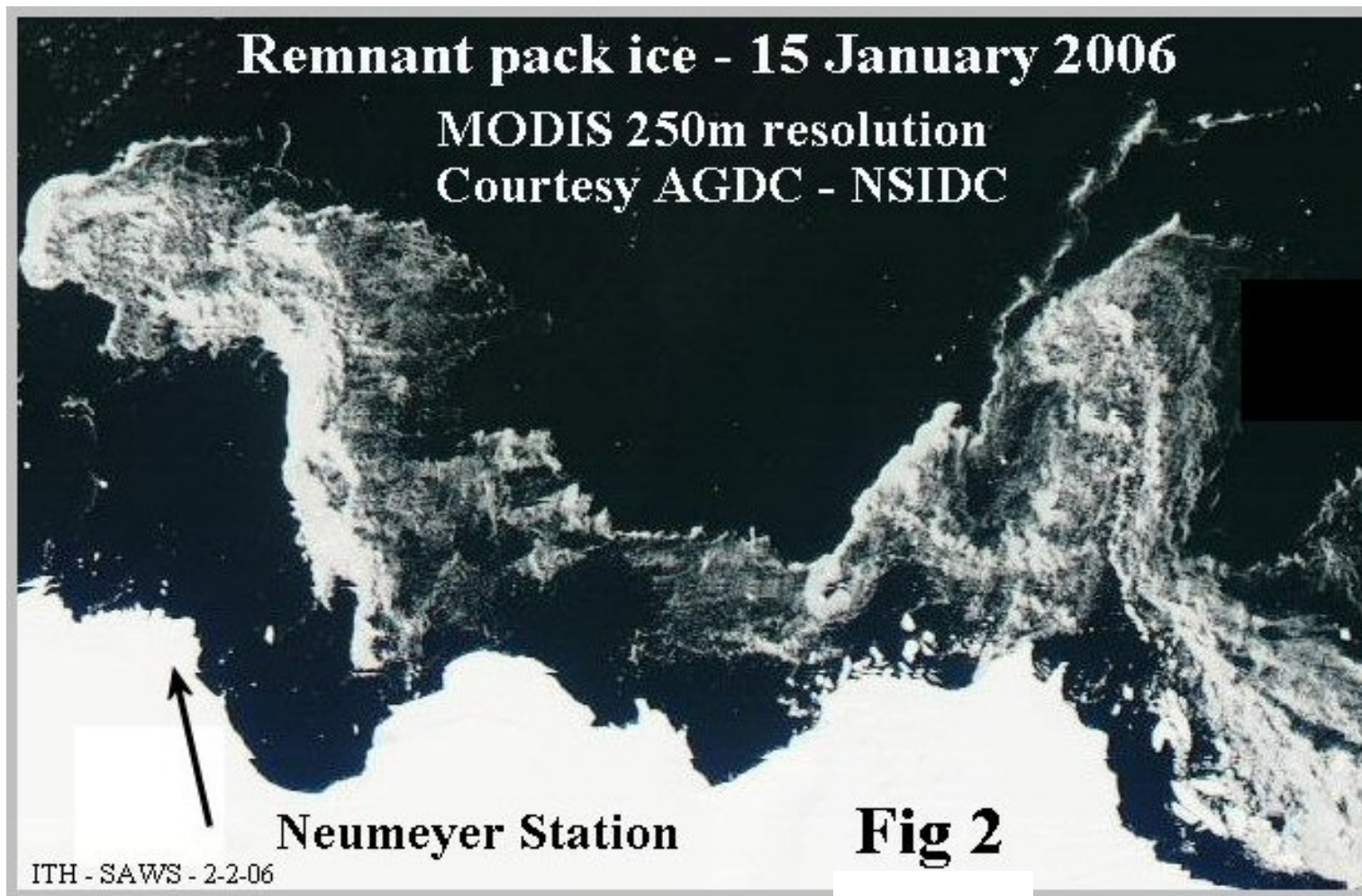
Back at  
Penguin Bukta

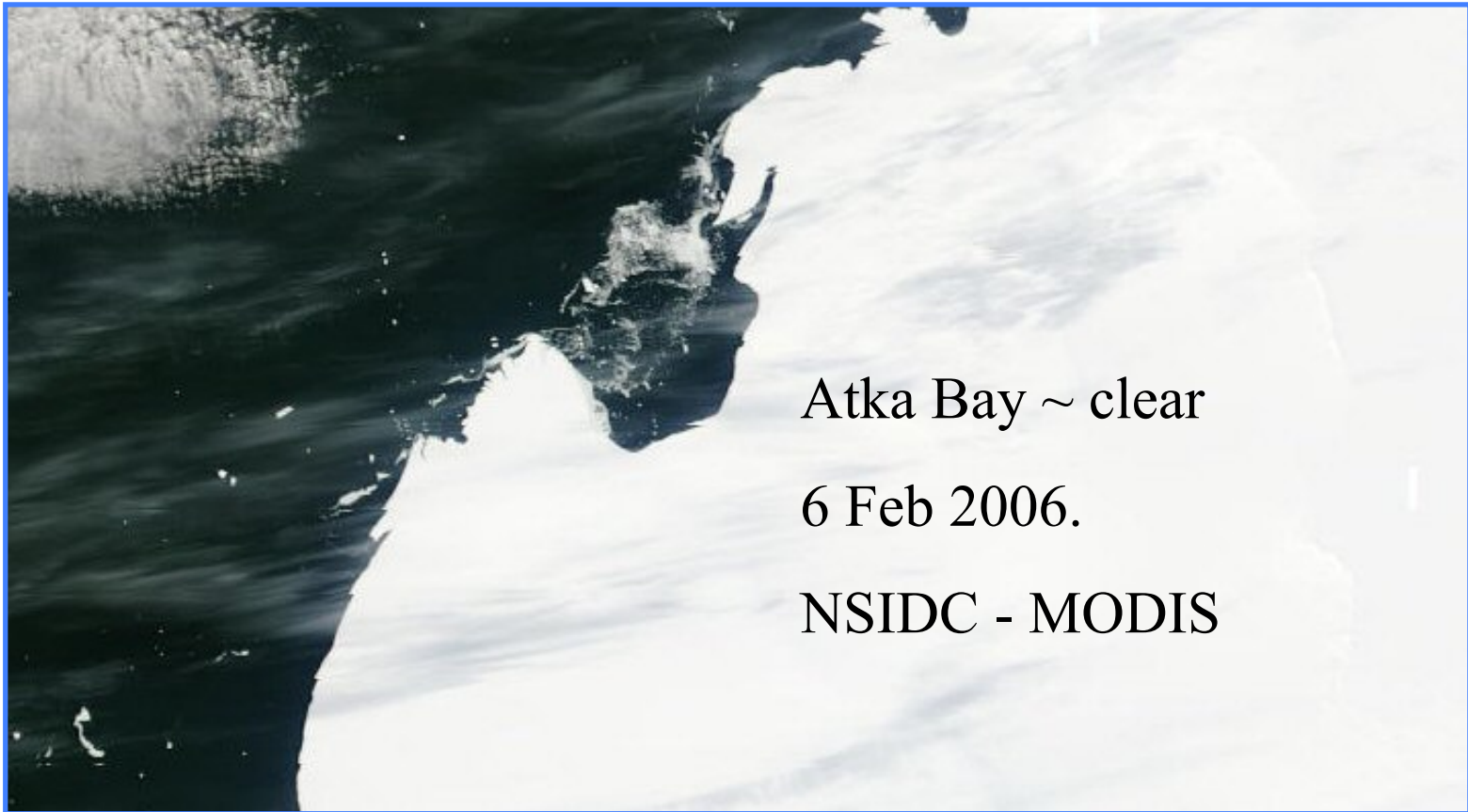


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Atka Bay ~ clear

6 Feb 2006.

NSIDC - MODIS

Headed home (via Bouvet Is ?)



Bouvet Island: lat/lon = (-54.43, 3.40)

AMPS MM5 Forecast Cycle:  
2006-02-11 / 12 Z

Model Grid ΔX:  
15.000 km

Temperature (°C)  
RH (% WRT liq. wat.)  
Cloud/Precip Outline  
Wind Barbs (kts) (true)

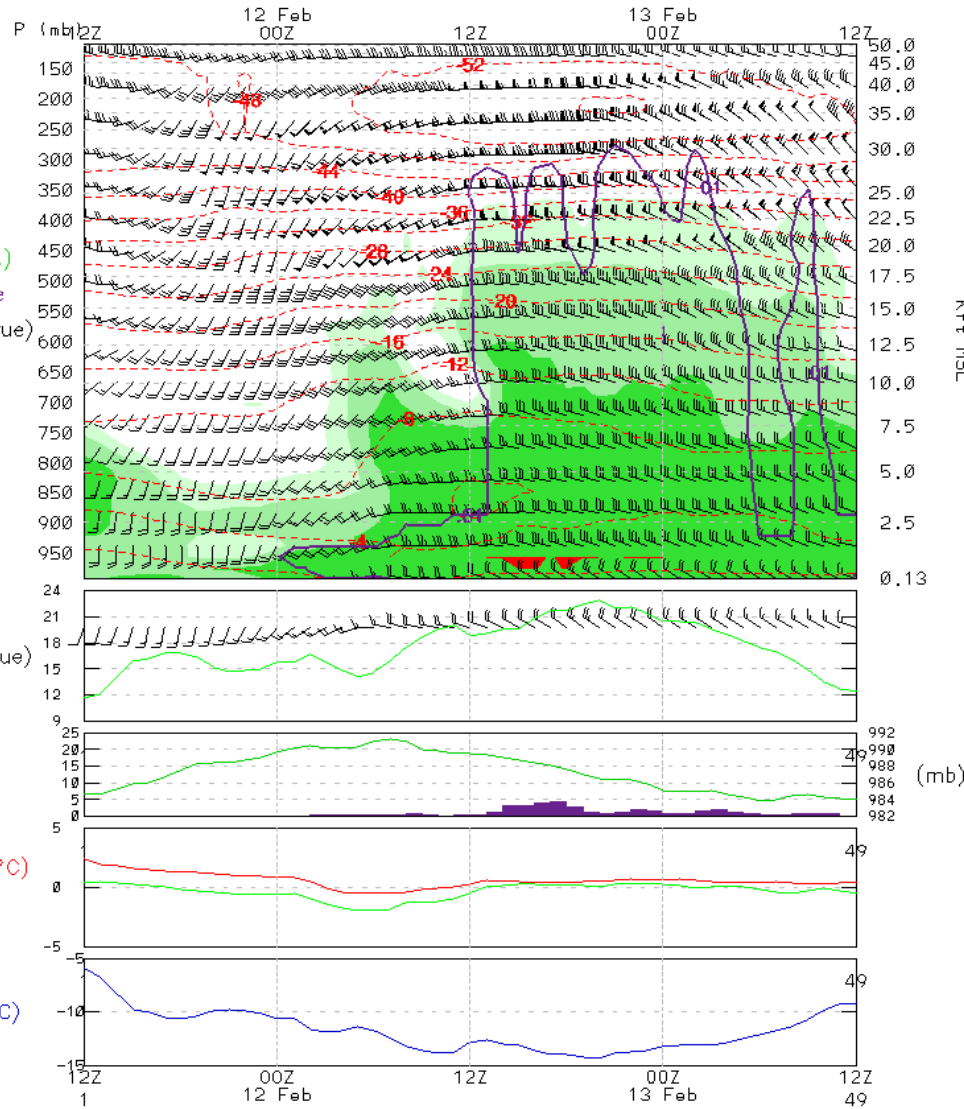
RH > 70%  
RH > 80%  
RH > 90%

Wind Spd (kts)  
Wind Barbs (true)

Precip (mm)  
liq. equiv.  
1-hr accum  
Pressure (mb)

Temperature (°C)  
Dewpoint (°C)

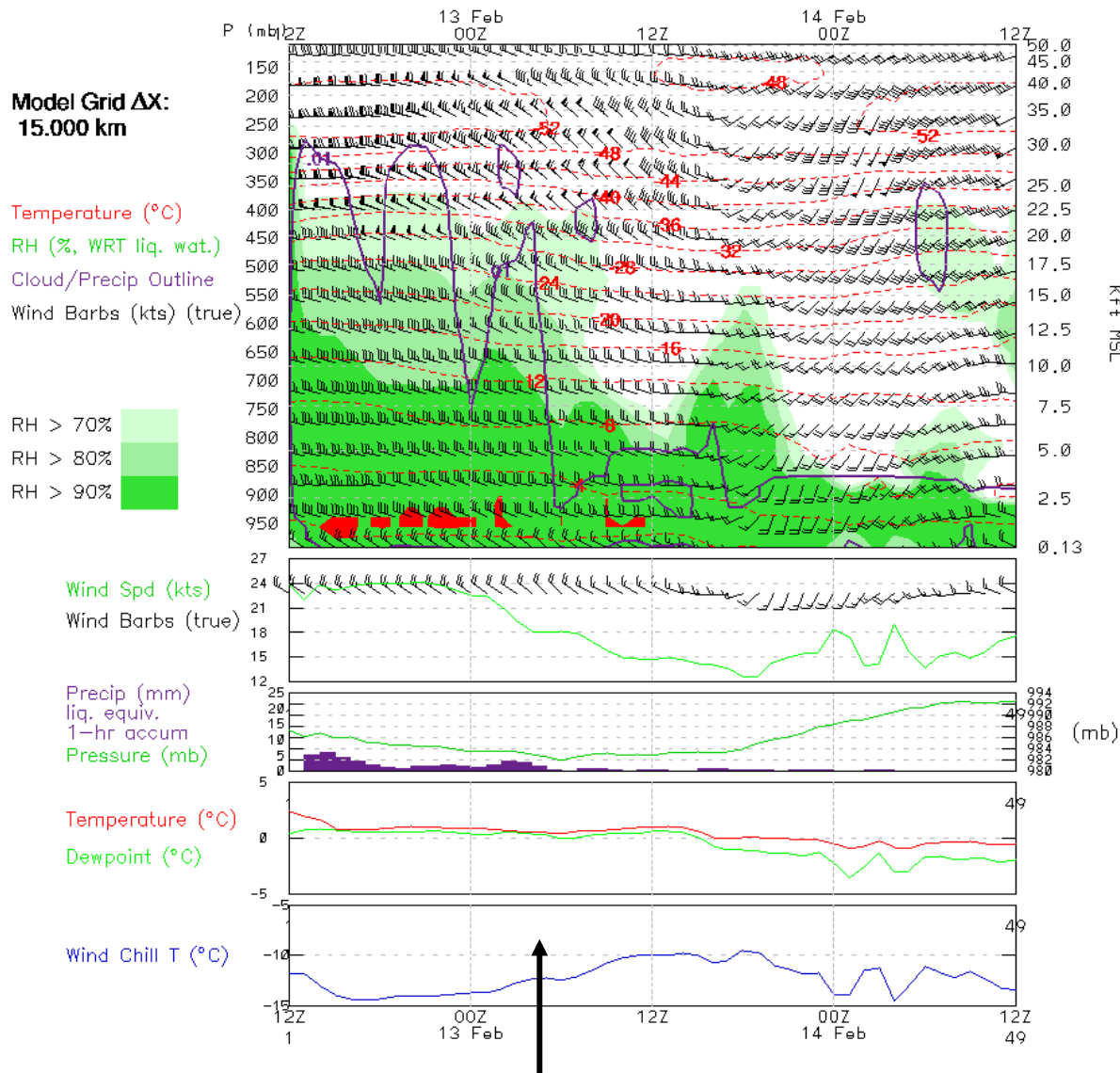
Wind Chill T (°C)

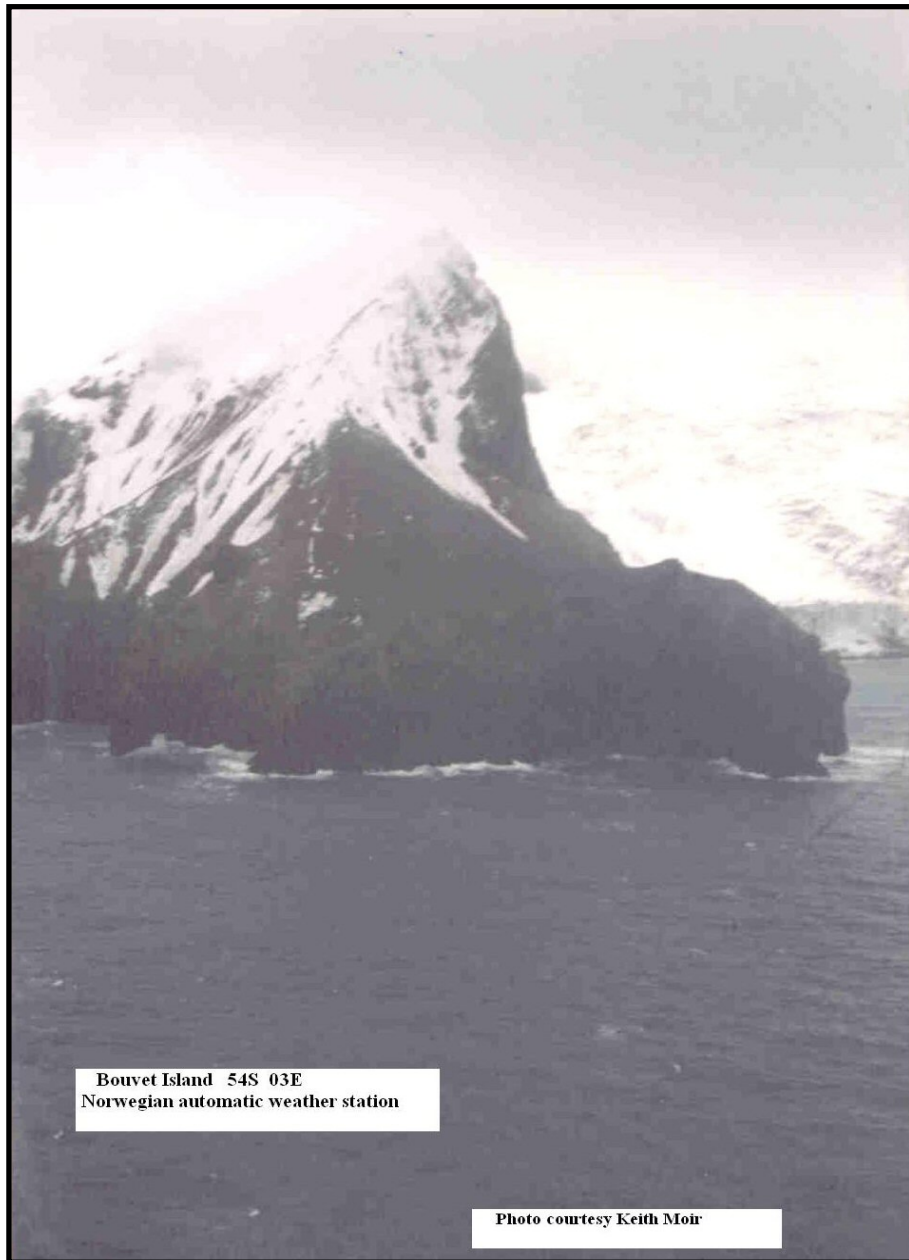


15 km 1-way  
AMPS model  
for Bouvet Is

Bouvet Island: lat/lon = (-54.43, 3.40)

AMPS MM5 Forecast Cycle:  
2006-02-12 / 12 Z





Bouvet Is  
-AWS courtesy of  
Norwegian  
Polar Institute



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# Marion Island : additional voyages in support of new base building project



Marion Island: lat/lon = (-46.88, 37.87)

AMPS MM5 Forecast Cycle:  
2006-03-08 / 12 Z

Model Grid ΔX:  
15.000 km

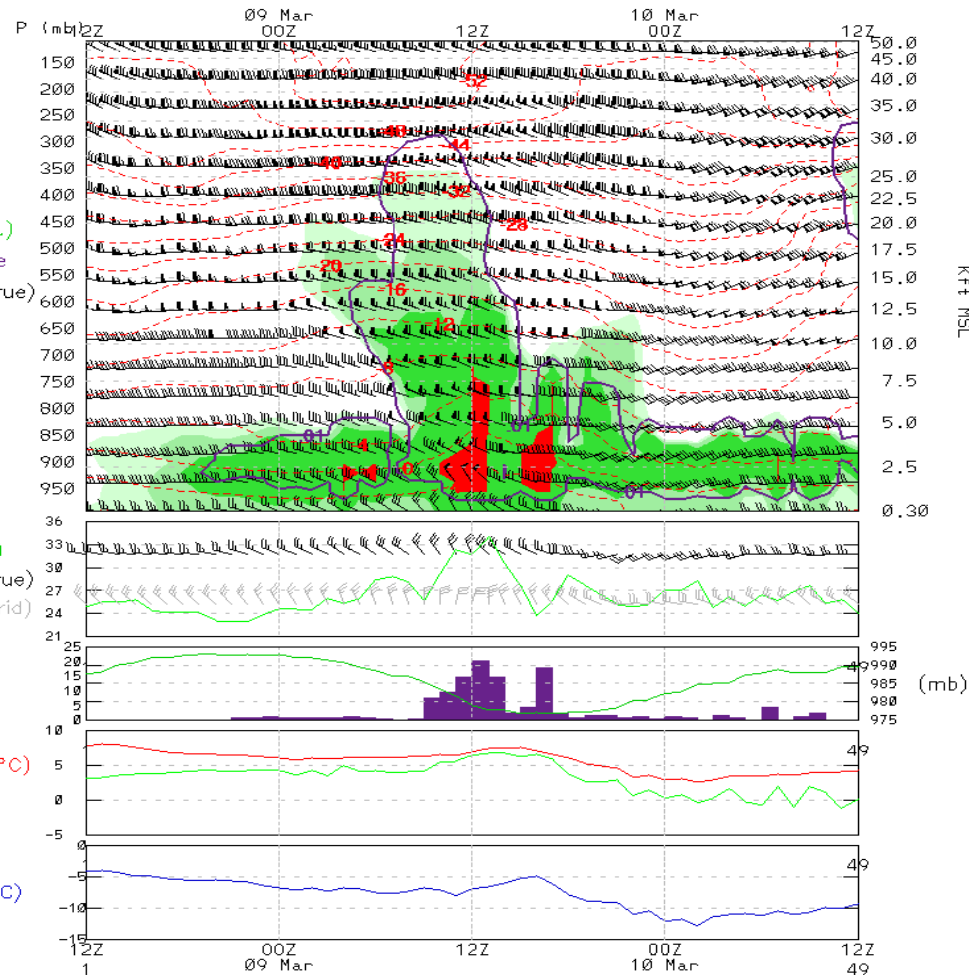
Temperature (°C)  
RH (% WRT liq. wat.)  
Cloud/Precip Outline  
Wind Barbs (kts) (true)

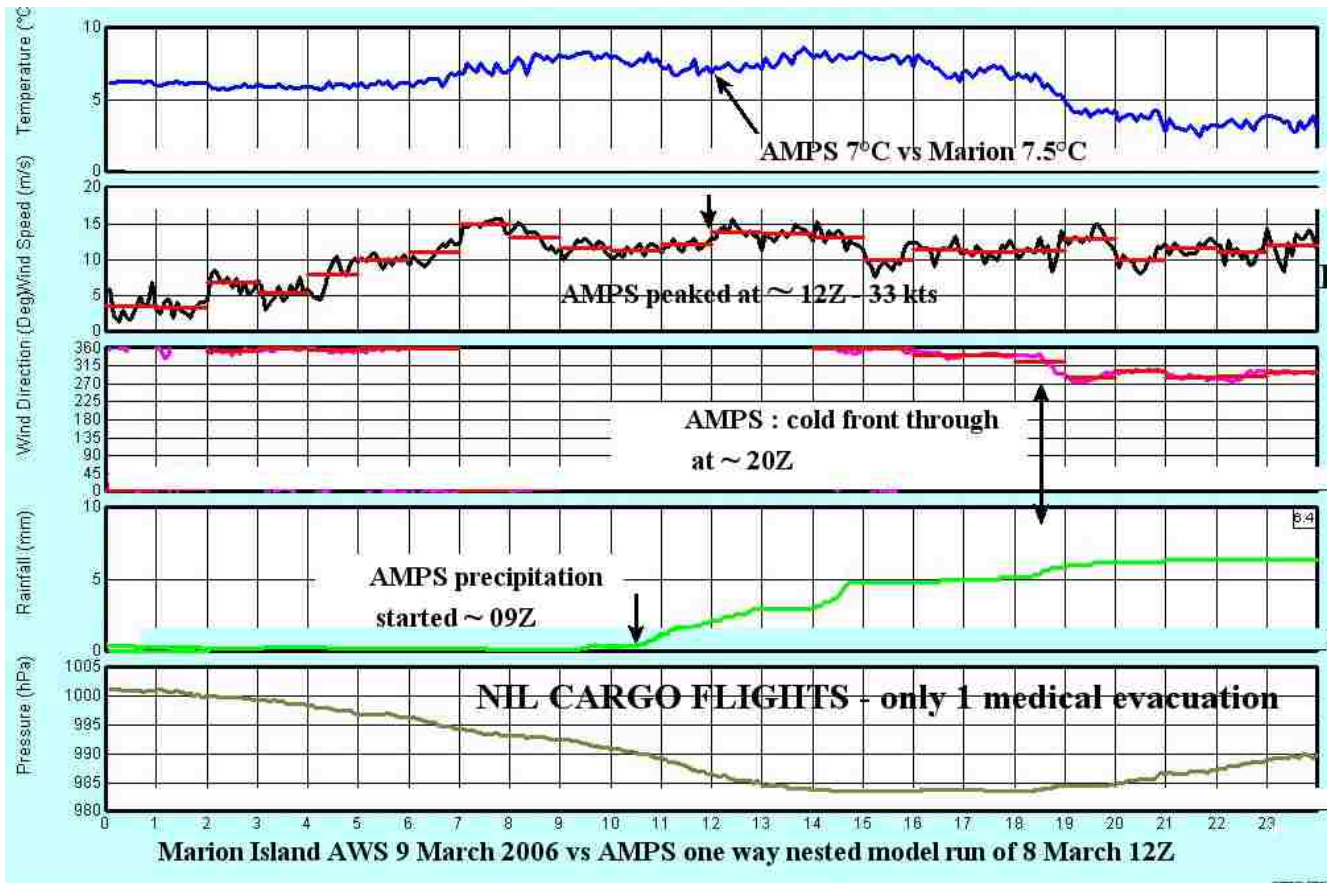
RH > 70%  
RH > 80%  
RH > 90%

Wind Spd (kts)  
Wind Barbs (true)  
Wind Barbs (grid)  
Precip (mm)  
liq. equiv.  
1-hr accum  
Pressure (mb)

Temperature (°C)  
Dewpoint (°C)

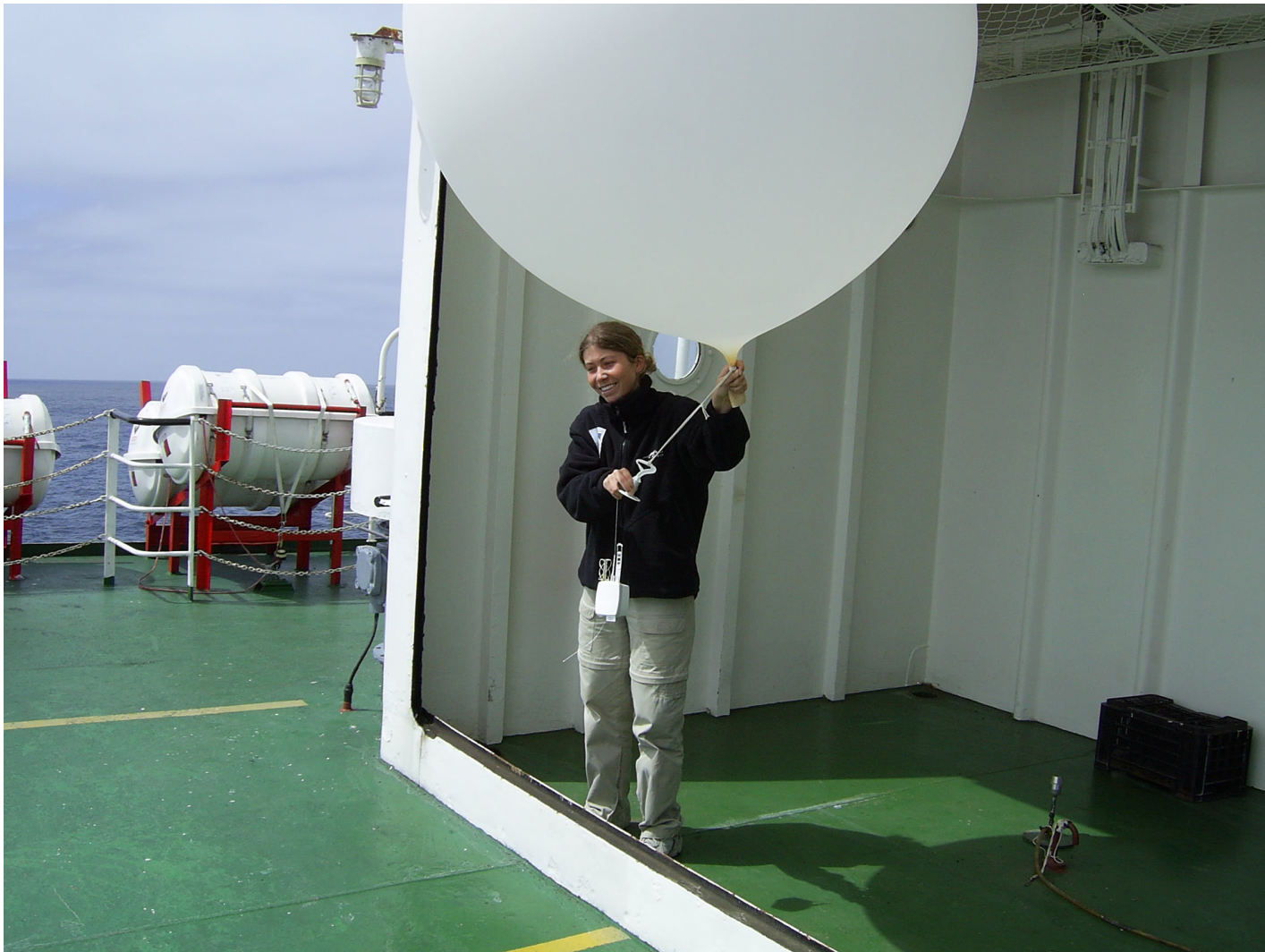
Wind Chill T (°C)



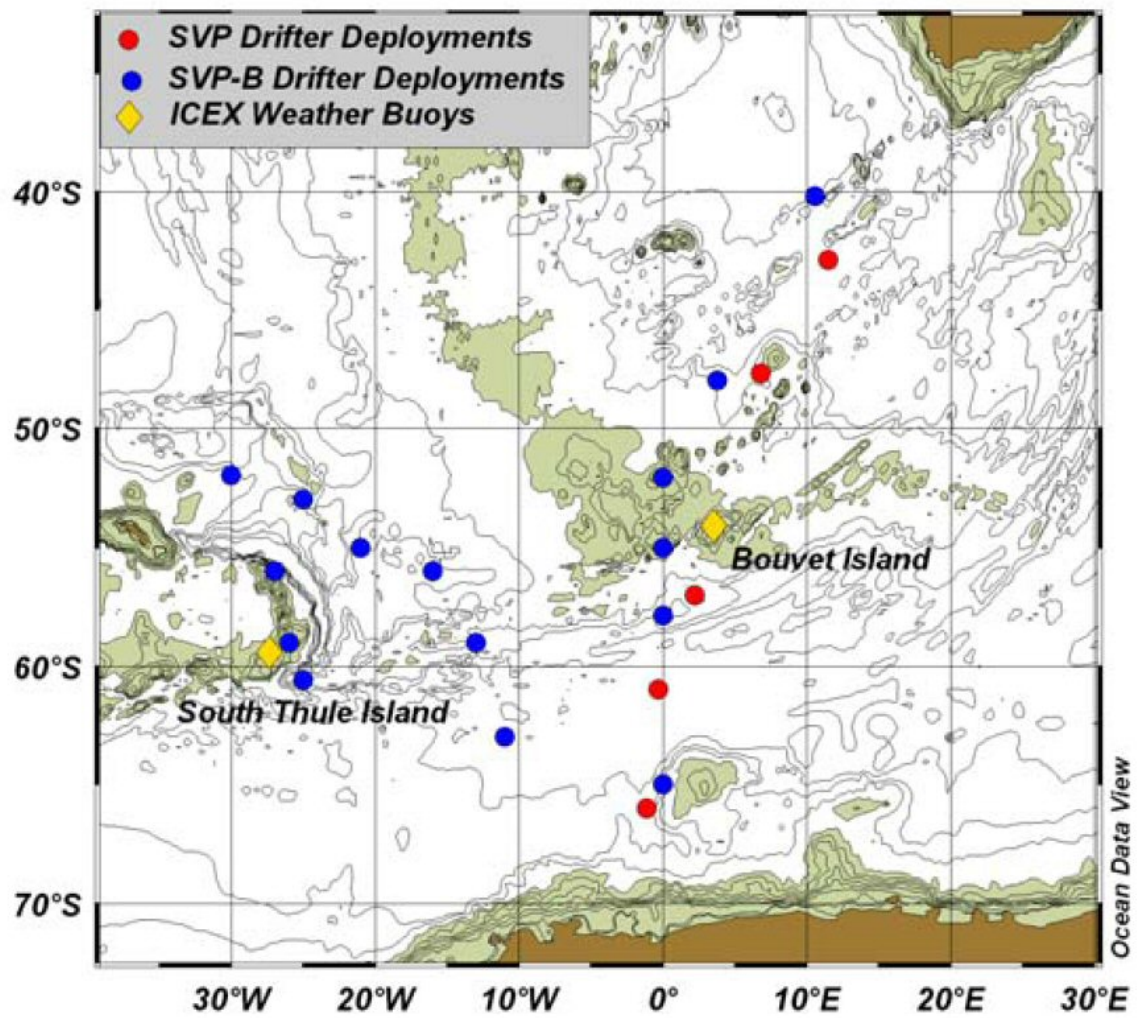


## data in exchange for products :

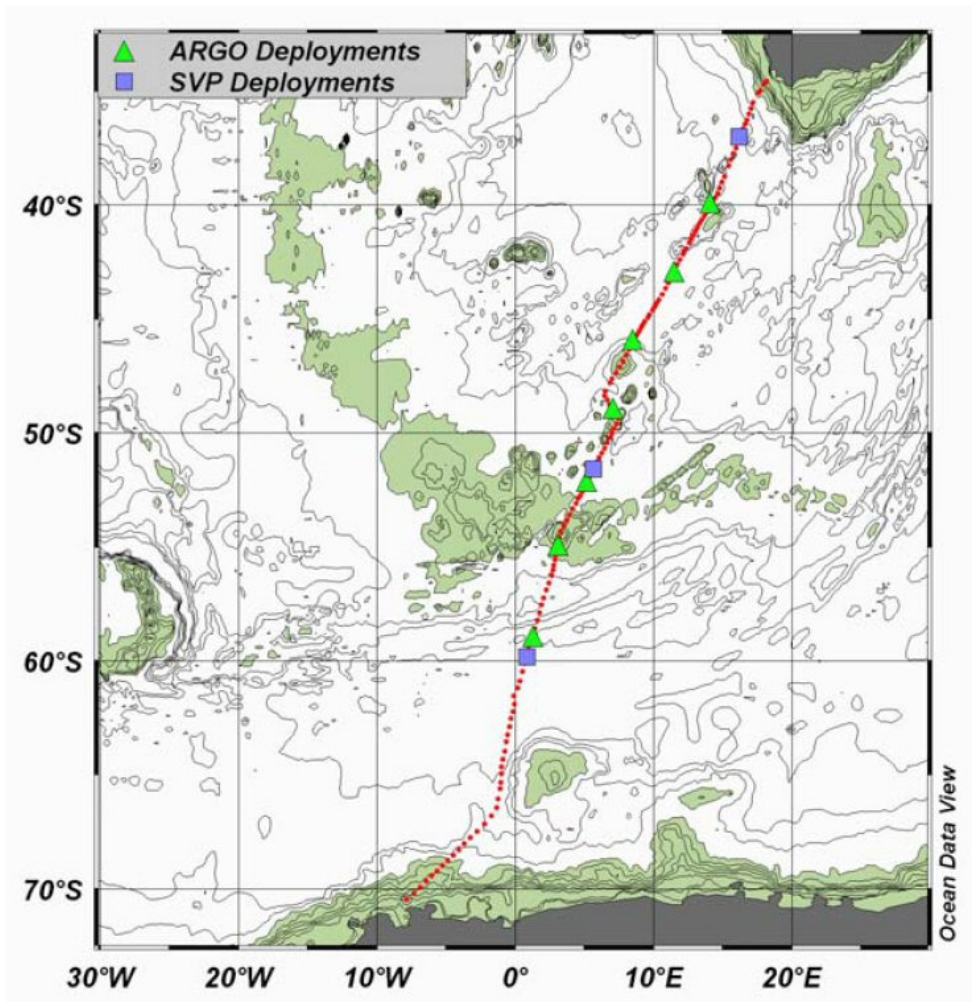
- Voluntary Observing Ship (VOS) data
- Radiosonde data
- Drifting weather buoy (SVP-B) data
- Deployment of XBT's, profiling floats
- etc



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Thank you to :



- AMPS group at NCAR
- NCEP
- UKMO
- NSIDC
- NIC
- MEDS

and many others