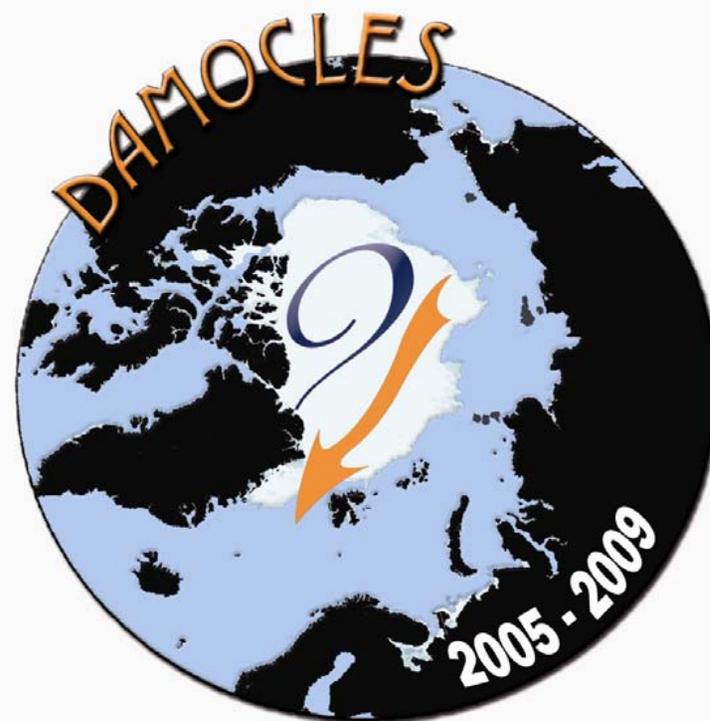




INTERNATIONAL 2007 & 2008
POLAR YEAR

Meteoroloogilised mõõtmised Arktika triivjääl



Erko Jakobson

23.03.2007

**DAMOCLES – Developing
Arctic Modelling and Observing
Capabilities for Longterm
Environmental Studies**



What is DAMOCLES ?

**A four years (2005-2009) European Integrated Project
In response to the 3rd call of the 6th FP of the EU
focusing on the Arctic and Climate Changes,
including extreme climate events**

It concerns

**45 partners institutions in 10 European Countries
30 Tasks distributed in 8 Workpackages**

GERMANY

AWI – C. Lüpkes
E. Fahrbach
U.Schauer
R. Gerdes
A. Beszczynska-Moller
C. Haas
M. Rutgers van der Loeff
UB – G. Heygster
C. Melsheimer
L. Kaleschke
UNIHAM- B. Brümmer & J. Meincke
OASYS – F. Kauker
M. Karcher
FastOpt – T. Kaminski
R. Giering

UNITED KINGDOM

CEFAS- S. Dye
R.R. Dickson
UCAM-DAMTP – P. Wadhams
UCL- S. Laxon
POL- C. Hughes
UREADES – K. Haines
SAMS- J. Wilkinson
ATL – A. Smerdon
S. Caine

DENMARK

DMI- S. Andersen
R. Tonboe
R. S.Gill
DTU- P. L. Toudal
DNSC- R. Forsberg

BELGIUM

IPF- A. Hubert
N.Johnson-Amin

FINLAND

FIMR- J. Haapala
J. Launianen
B. Rudels
T. Stipa
UoL- P. Kankaanpää
FMI- T. Vihma
C. Fortelius
HUT- M. Vainio

POLAND

IOPAN – J. Piechura
W. Walczowski
P. Schlichtholz

DAMOCLES

NORWAY

NERSC – O. Johannessen
S. Sandven
H. Drange
H. Sagen
K. A. Lisaeter
Met.no – H.Schyberg
C. Mauritzen
O. Godoy
J.Debernard
NPI- E. Hansen
S. Gerland
IMR – H.Loeng
UIB – P. M. Haugan
K. Arild Orvik
I. Fer
UNIS – F. Nilsen
CICERO – G. Eskeland
A. Aaheim
NAXYS – J. Abrahamson
Aanderaa – K. G. Frøysa

GREECE

FORTH- E. Skarsoulis

ESTONIA

UT- J. Jaagus

RUSSIA

SRC AARI- S.Priamikov
Sokolov
Ashik
SIO – S. Pisarev
Y. Egorov
D. Darbinian
S. Vavilov
N. Dikareva

FRANCE

UPMC – J. C. Gascard
P. Bouruet-Aubertot
F. Vivier
H.Lemoine
E.Billi
IFREMER – R. Ezraty & G.Loaec
CNRS/LGGE – J. Weiss
UdS- D. Marsan
J.P. Metaxian
MSI- P. Brault
CPX – C. de Marliave
IPEV – A. Desautez
ENSIETA – N. Seube
& I. Probst

External partners Cooperation EU-US “SEARCH for DAMOCLES”

LDEO – P. Schlosser
IARC – J. Walsh
UAF – H.Eicken
WHOI - A.Proshutinsky & J. Toole
APL – C. Lee & J.Morison
CRREL - J.Richter-Menge & D.Perovich
JAMSTEC – T. Kikuchi (J. CAD)
IOS – H. Melling (IPS)

SWEDEN

SMHI – R. Döscher
H. E. M. Meier
K. Wyser
K. Borenäs
J. Söderkvist
N. Gustafsson
S. Gollvik
V. Perov
L. Axell
L. Funkquist
SU- M. Tjernström
UGOT – L. Anderson
G. Björk

DAMOCLES and IPY

**The International Polar Year
IPY 2007-2008**

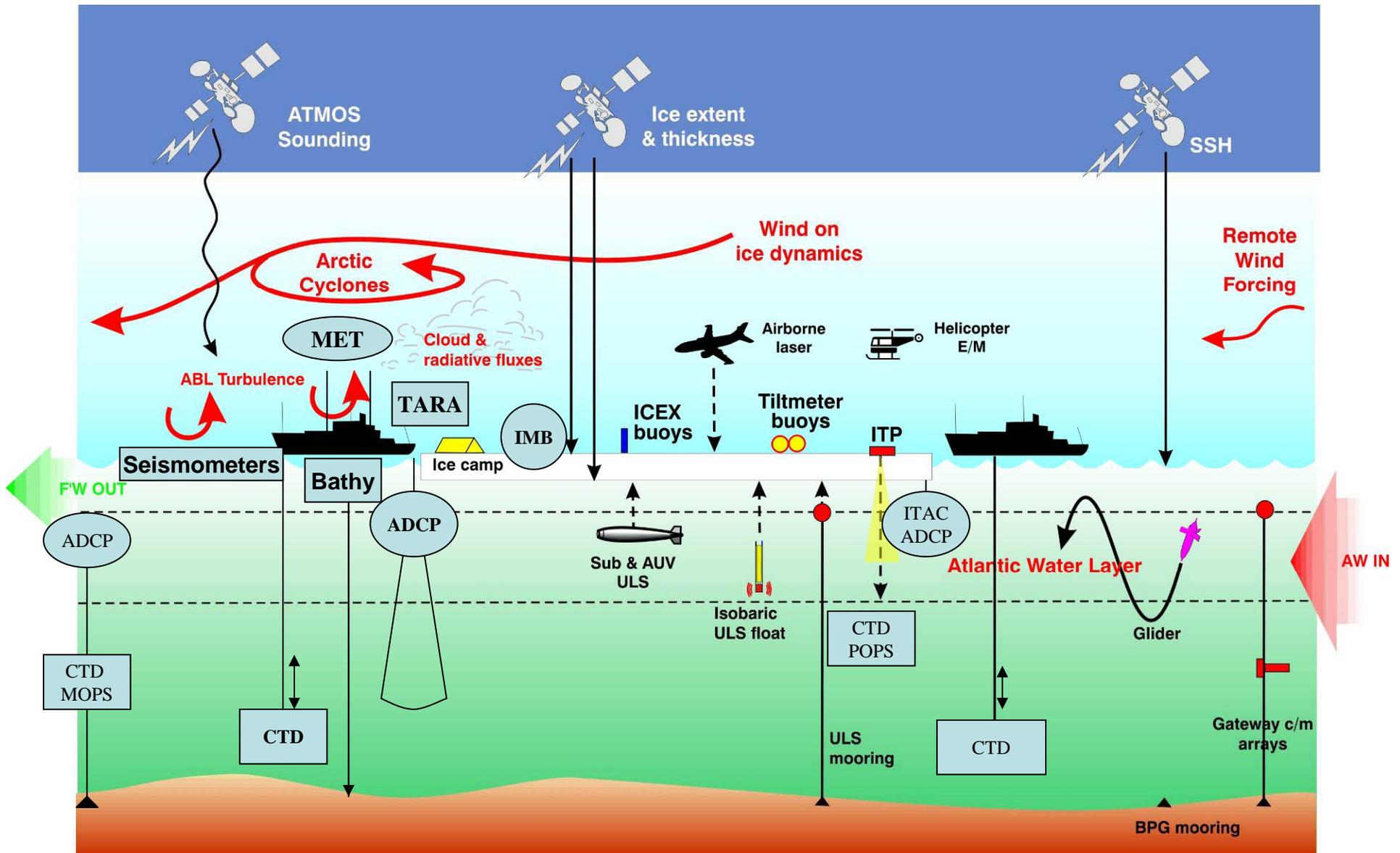
**a Constellation of more than 1000 proposals
distributed among 100 clusters**

**DAMOCLES is an Integrated Project of the European Union
part of the 6th framework program**

DAMOCLES stands for

**« Developing Arctic Modelling and Observing Capabilities
for Long-term Environment Studies »**

DAMOCLES is a major effort of the EU for IPY



Schematic of the vertical stack of observations from satellites to seabed that would be necessary to inform an iAOS study focused on the present state and future fate of the Arctic perennial sea-ice.

TARA

Technical characteristics:

Length : 36 meters

Width : 10 meters

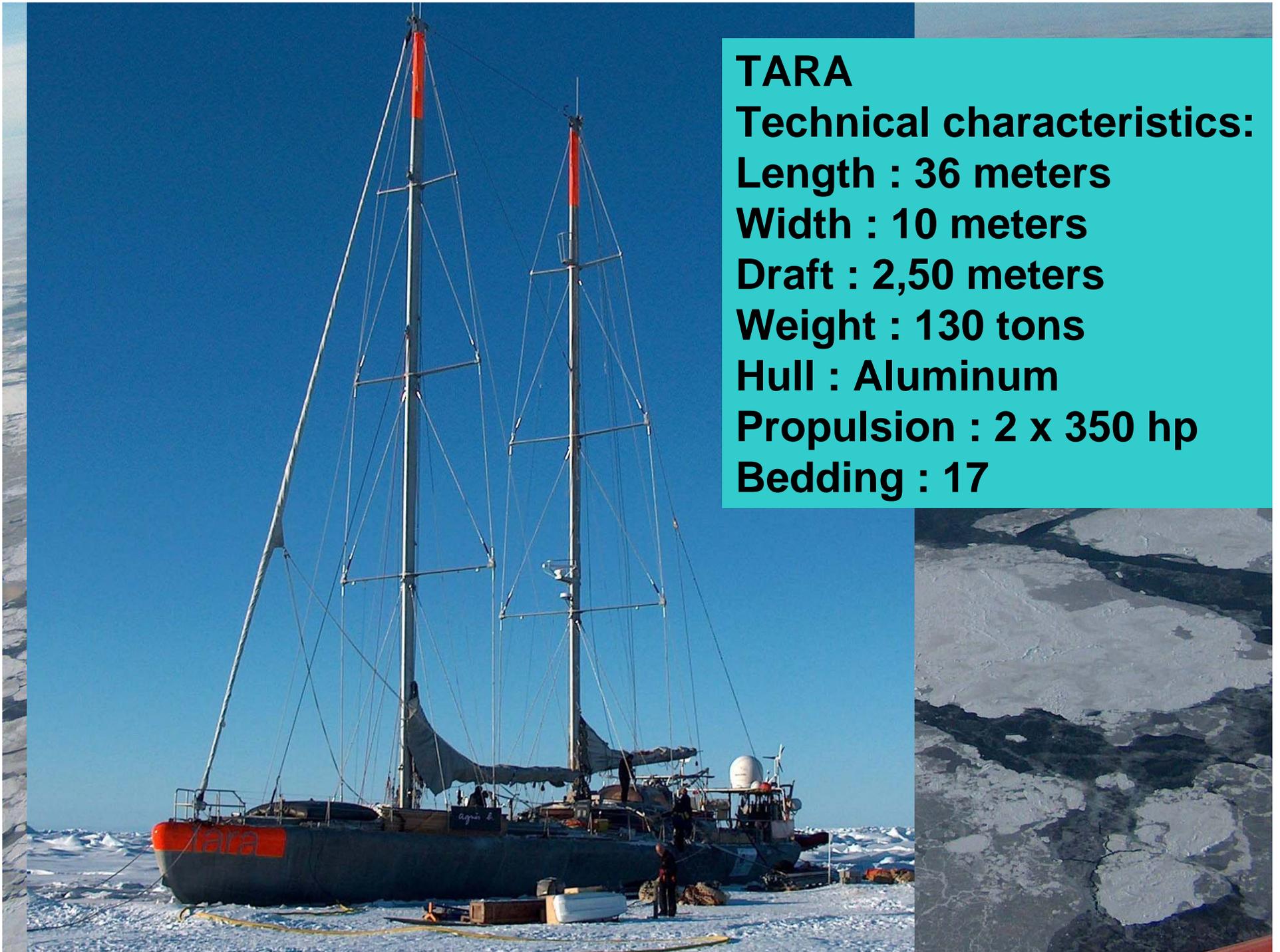
Draft : 2,50 meters

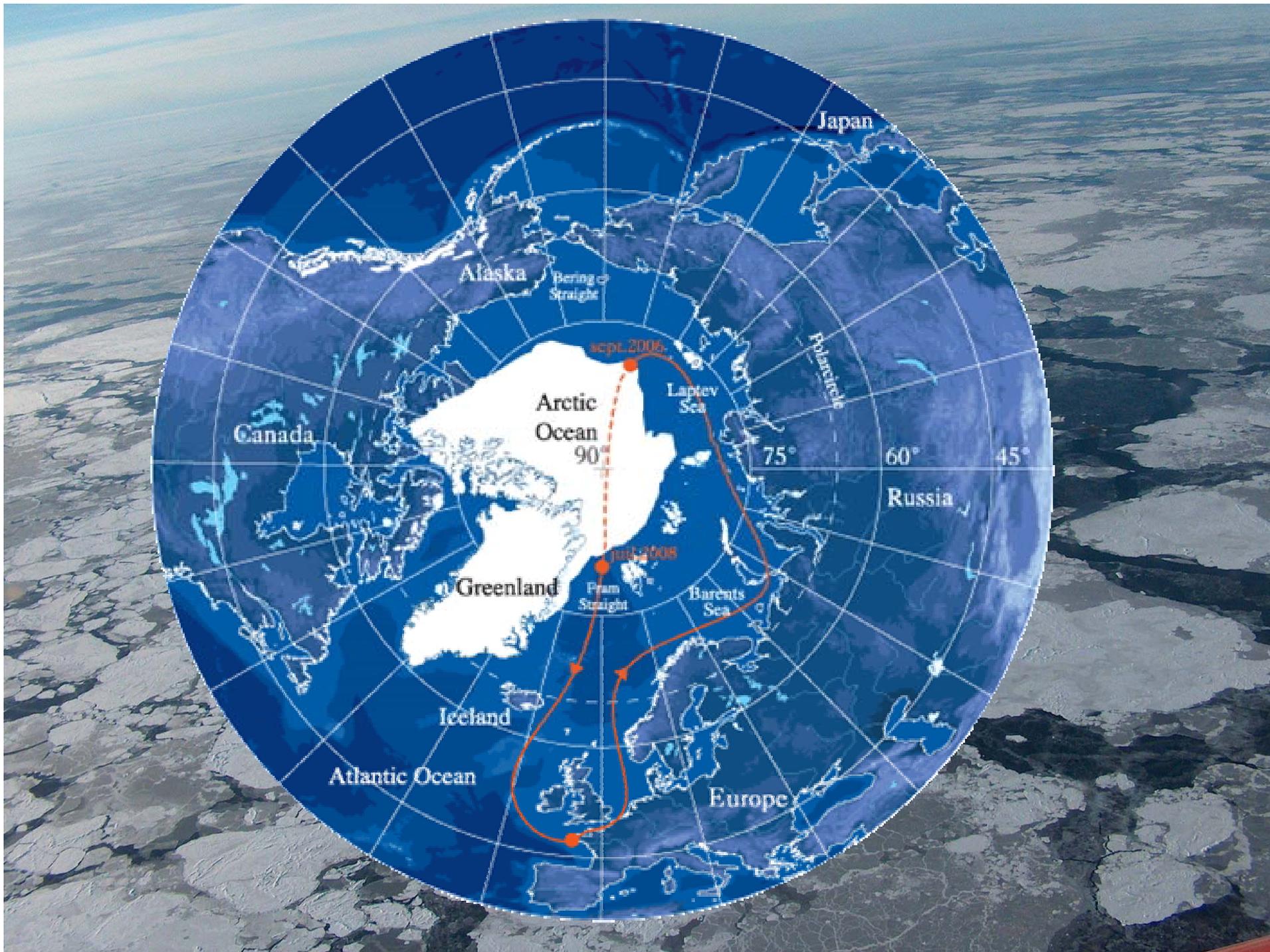
Weight : 130 tons

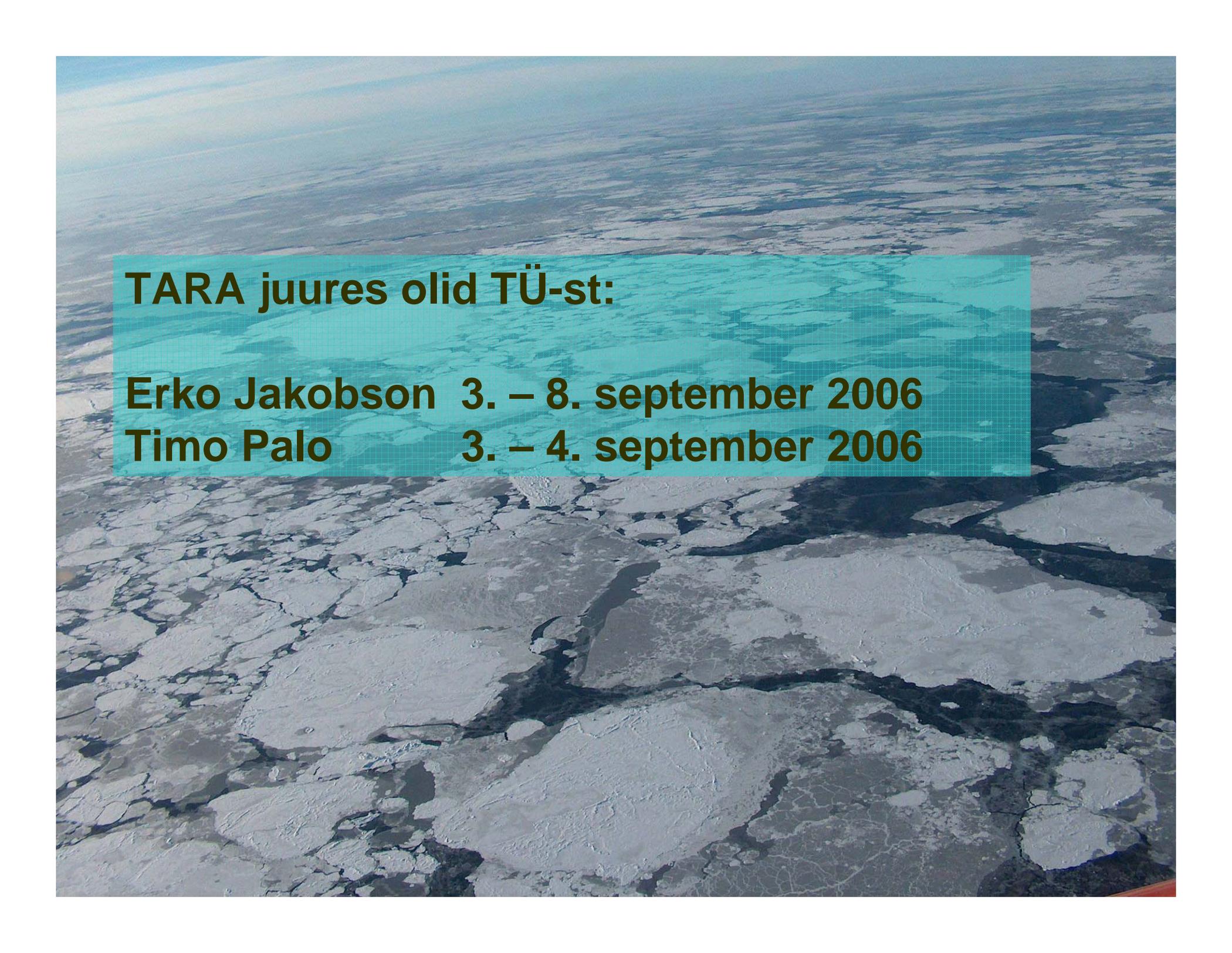
Hull : Aluminum

Propulsion : 2 x 350 hp

Bedding : 17







TARA juures olid TÜ-st:

Erko Jakobson 3. – 8. september 2006

Timo Palo 3. – 4. september 2006

Meie ülesandeks oli TARA juurde järgmiste mõõteseadmete ülesseadmine:

10m mast (Aanderaa) 4 levels

Wind speed at 10m, 5m, 2m and 1m

Wind direction at 10m

Air temperature at 10m, 5m, 2m and 1m

Air pressure and humidity at 2m

Two sonic anemometers (3D Metek) at 3m

Turbulent heat fluxes and momentum

Two Pyranometers (PSP Eppley) at 2m

Short Waves downward and upward

Two Radiometers (PIR Eppley) at 2m

Long Waves (IR) downward and upward

Vaisala Tethersonde Kytoon (0 - 1500m profile)

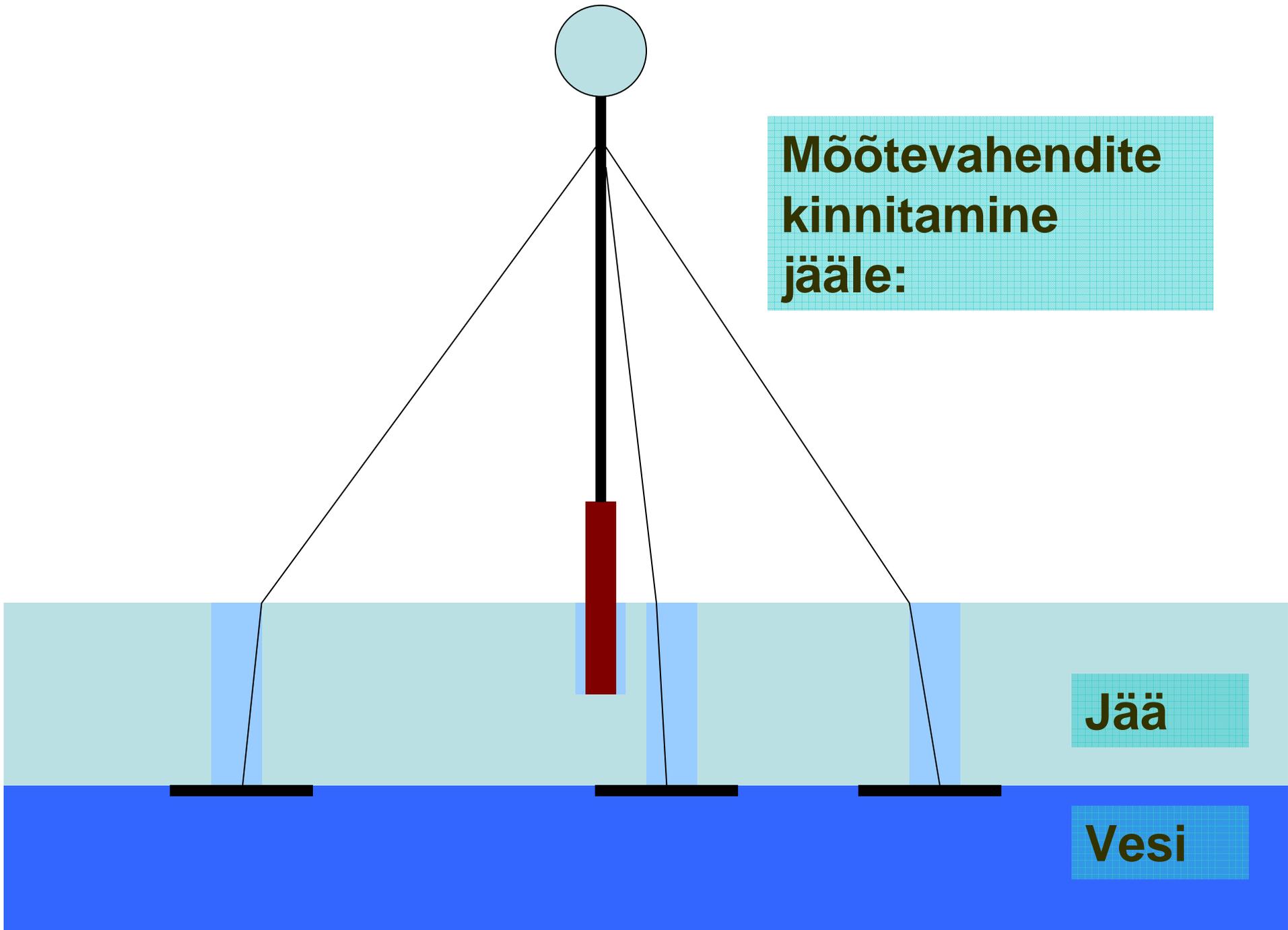
Air temperature, pressure, humidity, wind speed and direction



AUTOMATIC
WEATHER
STATION
2700 CE



3. september 2006



**Mõõtevahendite
kinnitamine
jääle:**

Jää

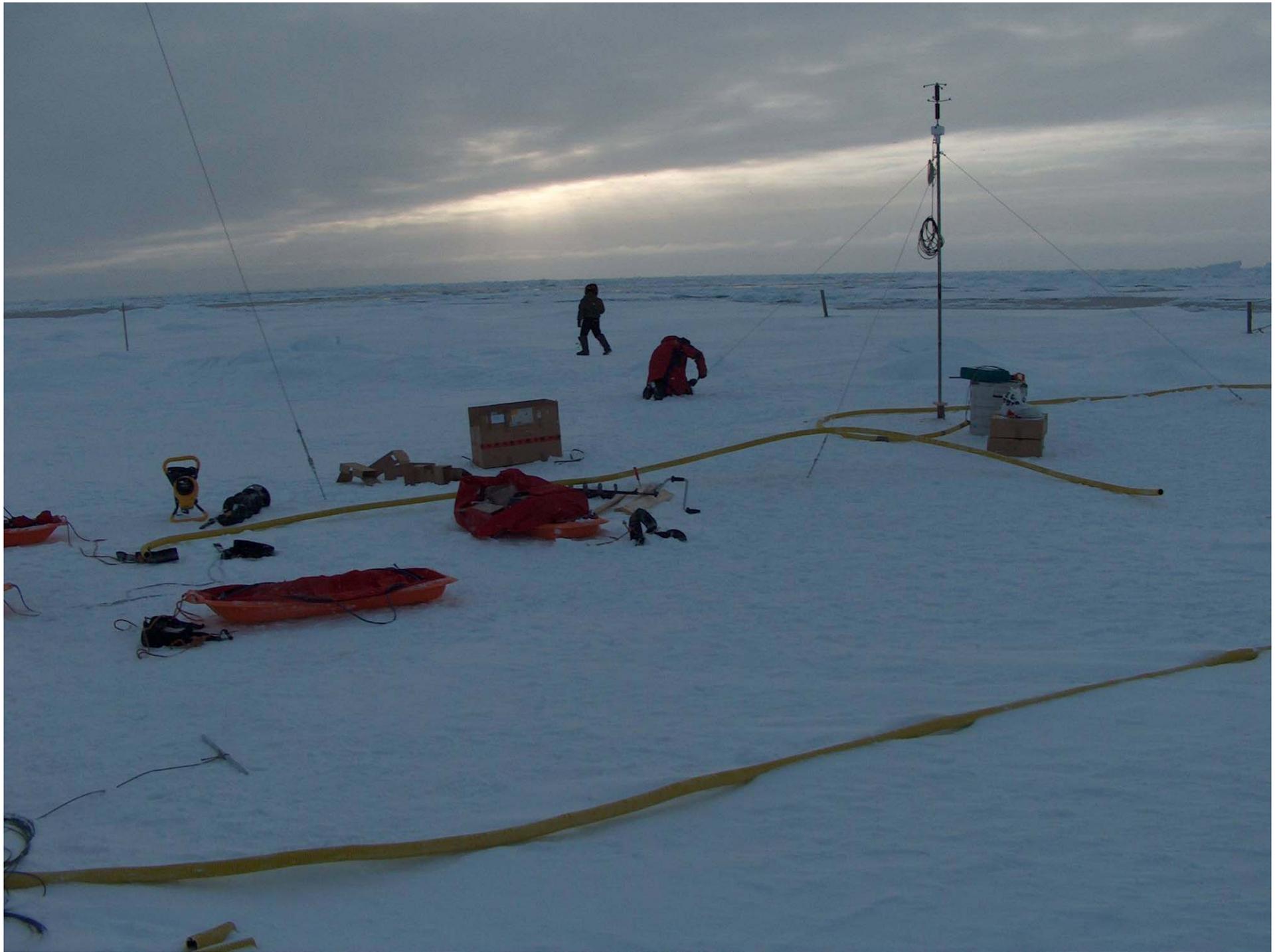
Vesi









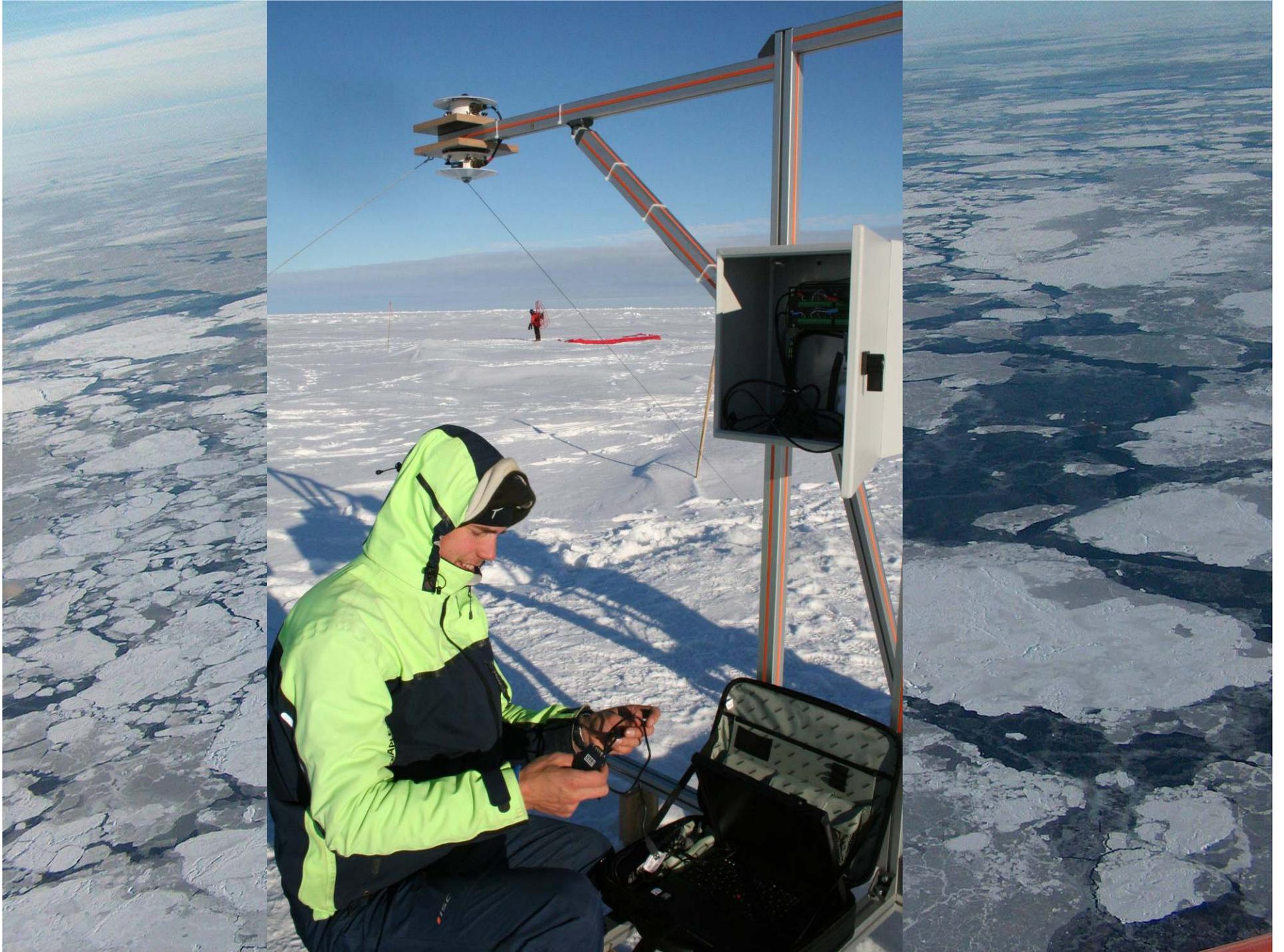


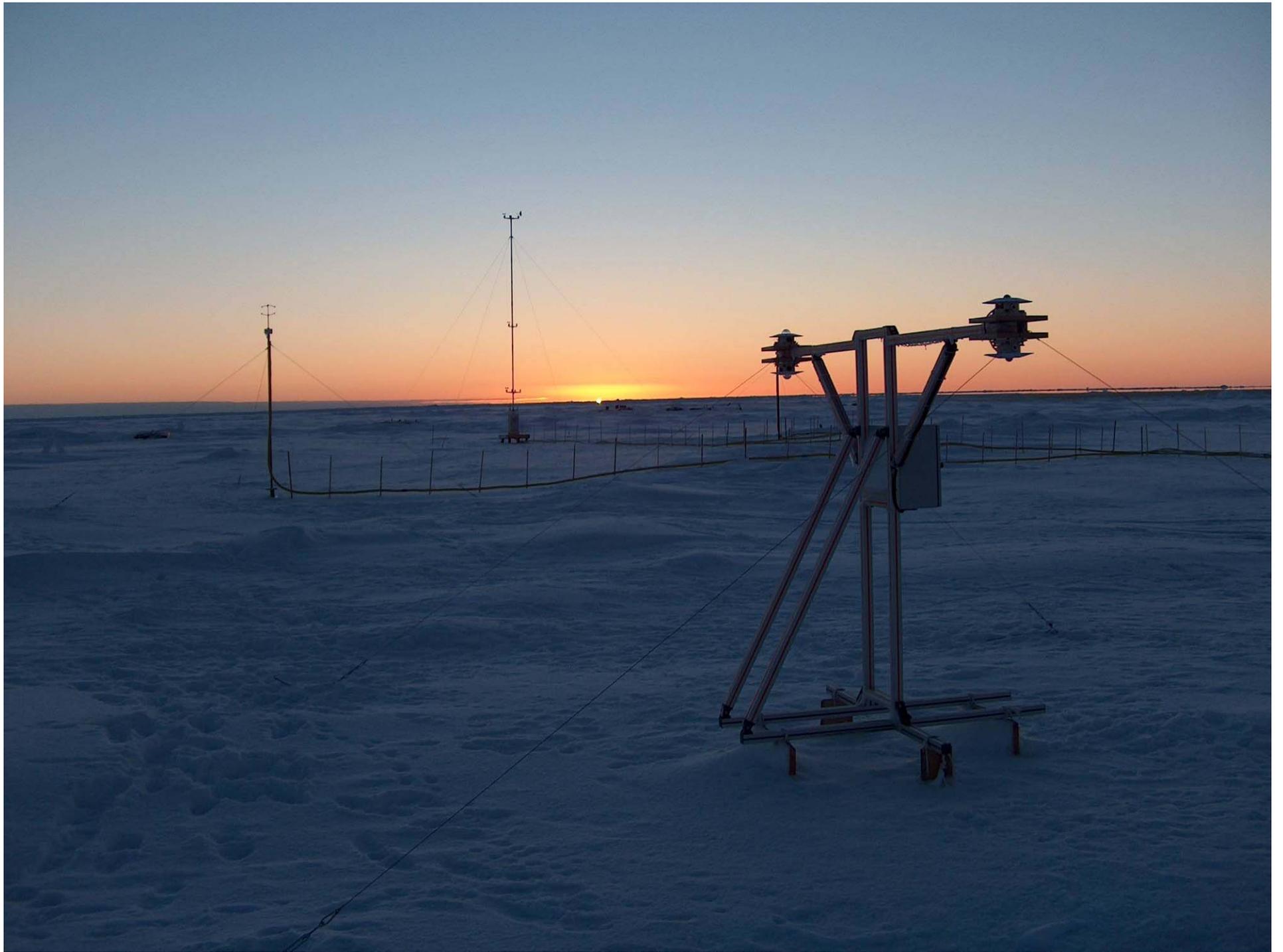


4. september 2006















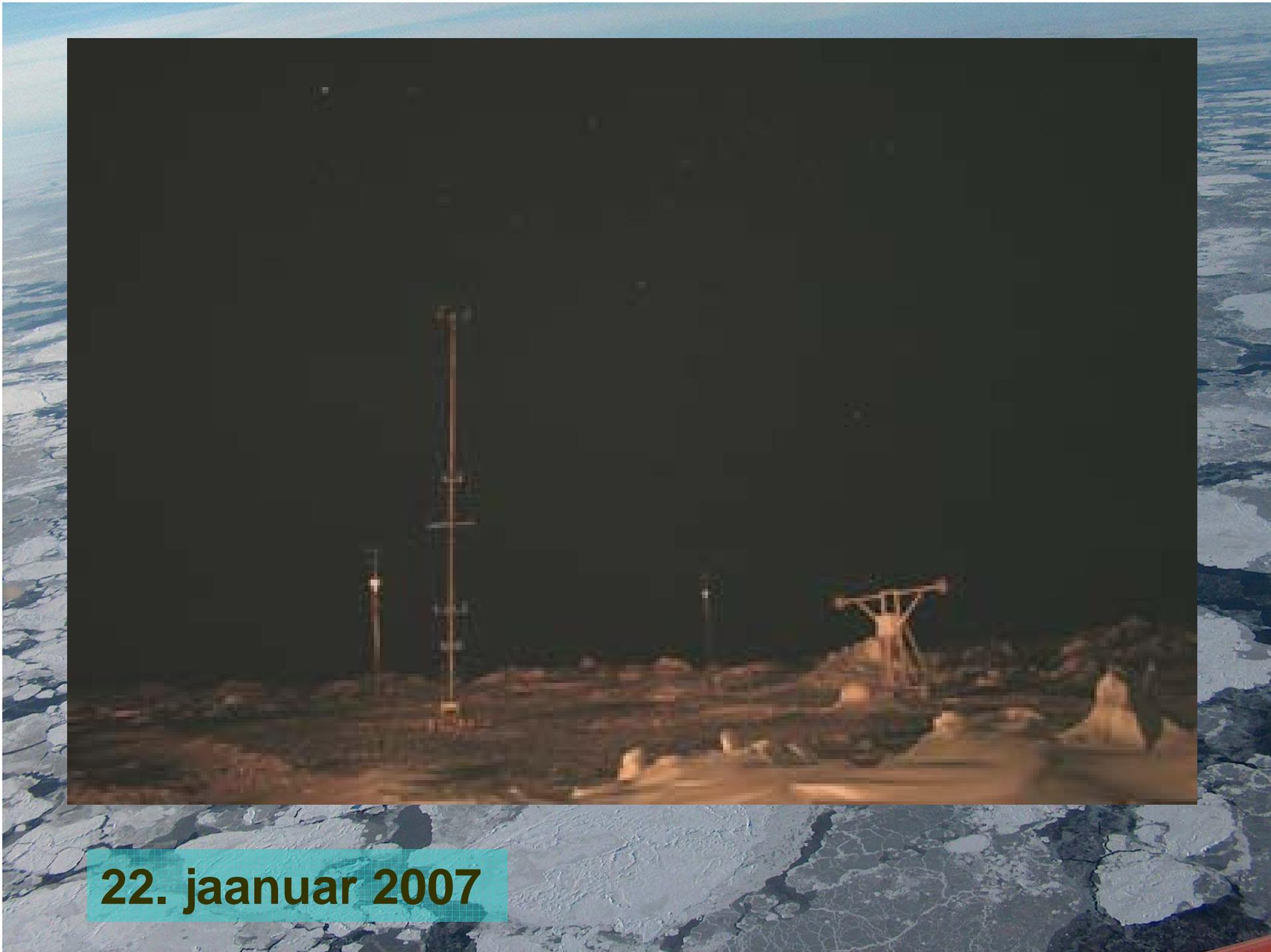
8. september 2006



Olukord pärast 12–16 sept. 2006 toimunud tormi



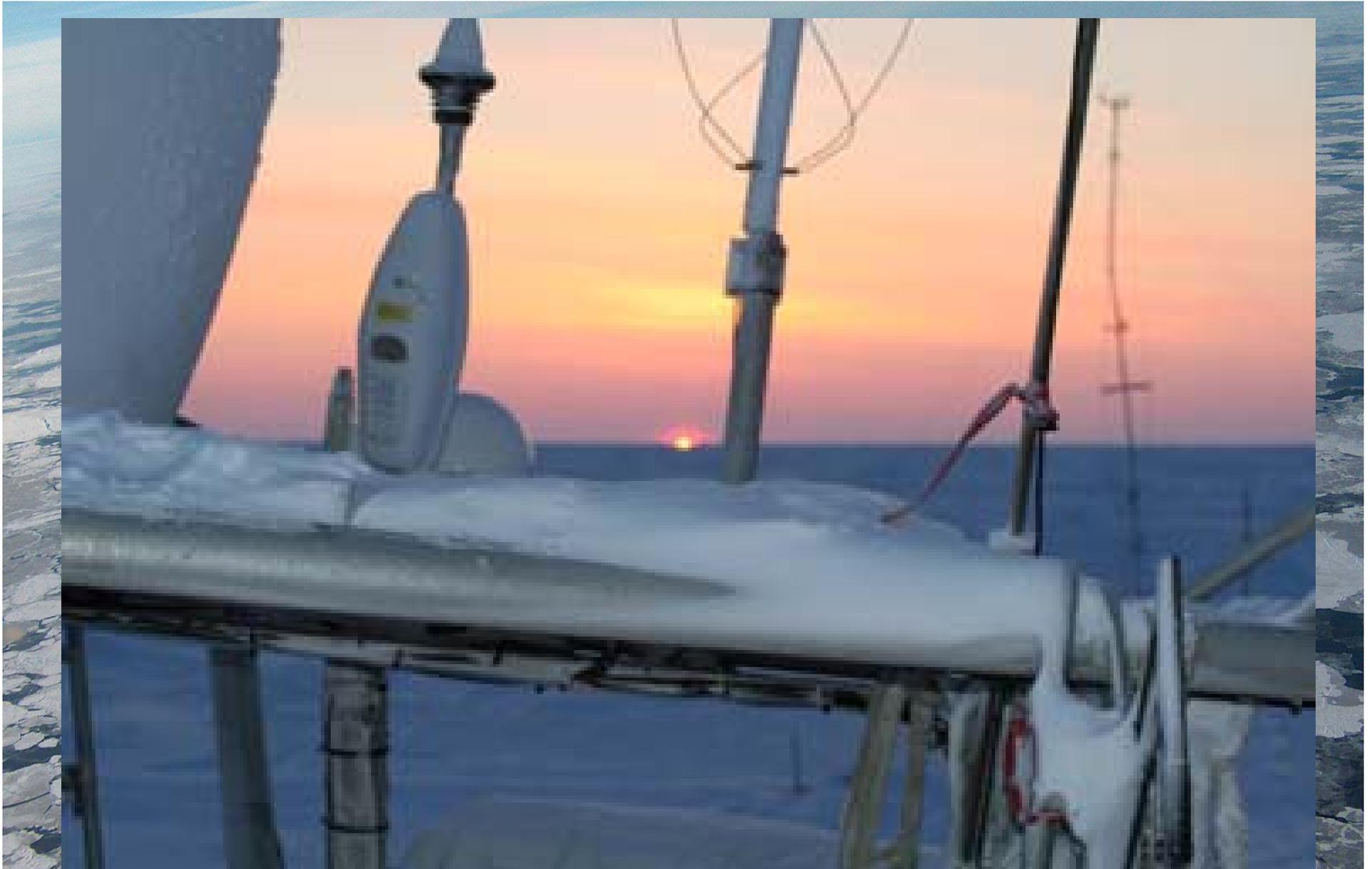
2. oktober 2006



22. jaanuar 2007

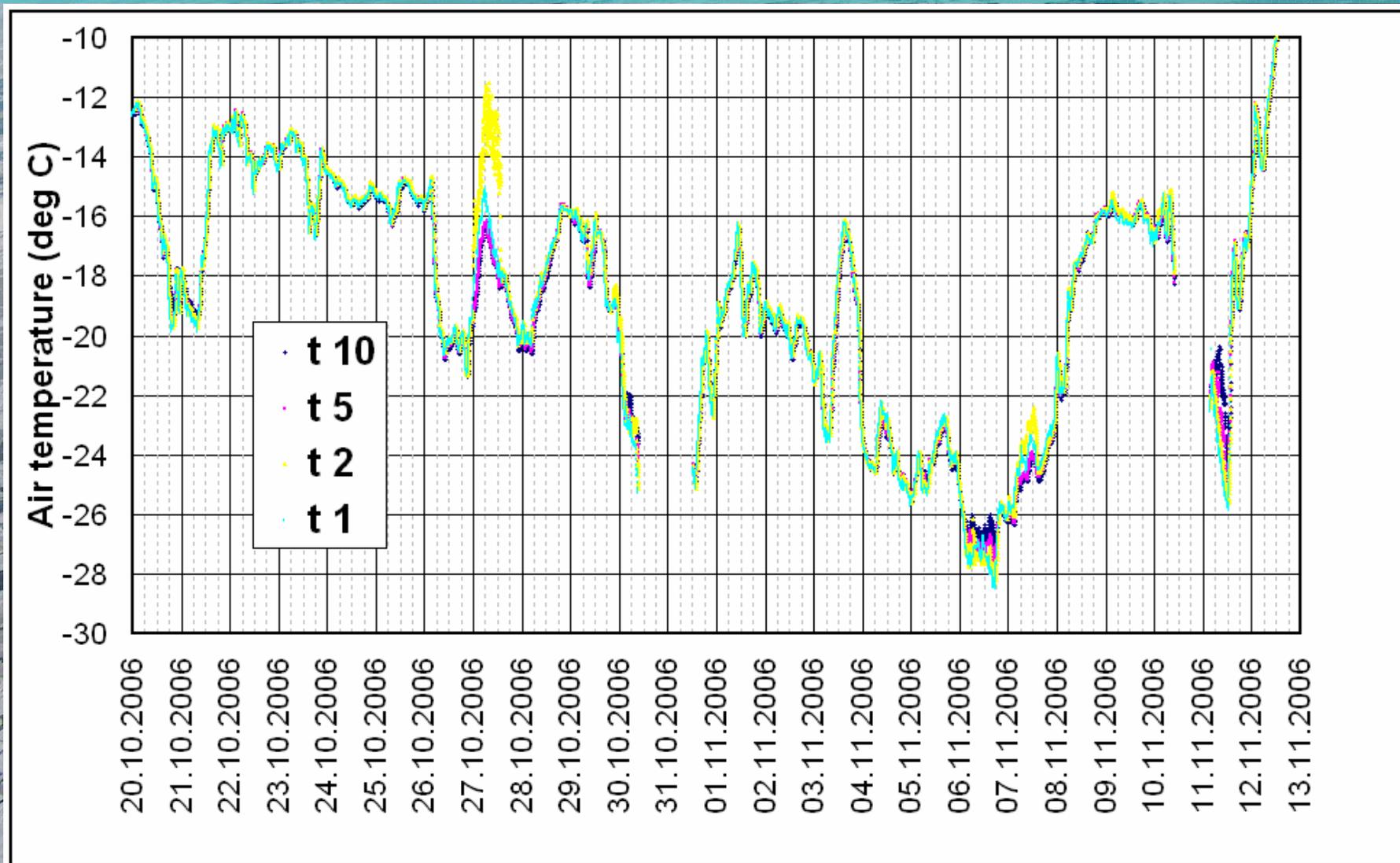


6. märts 2007, pärast 3 päeva kestnud tormi

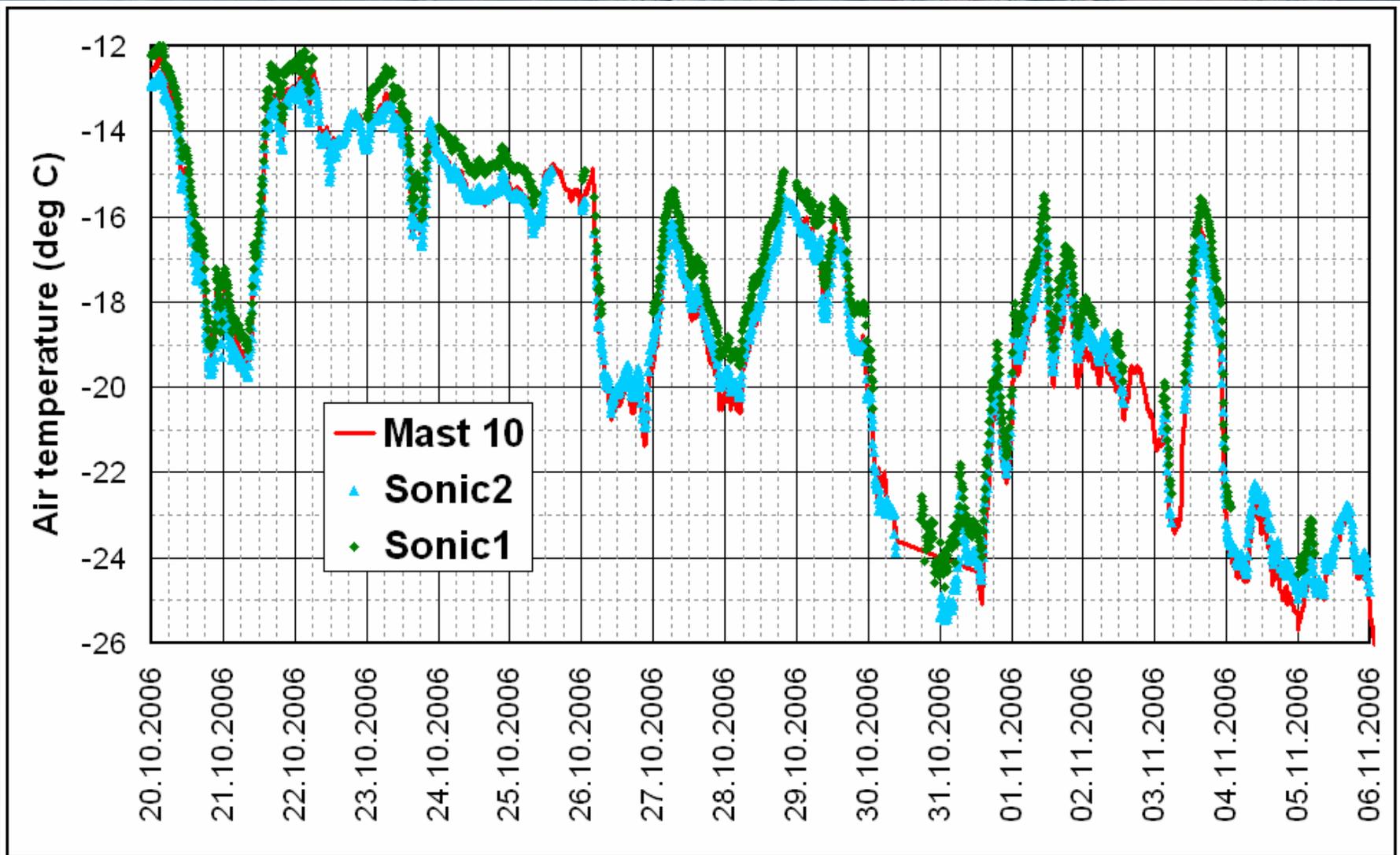


8. Märts 2007

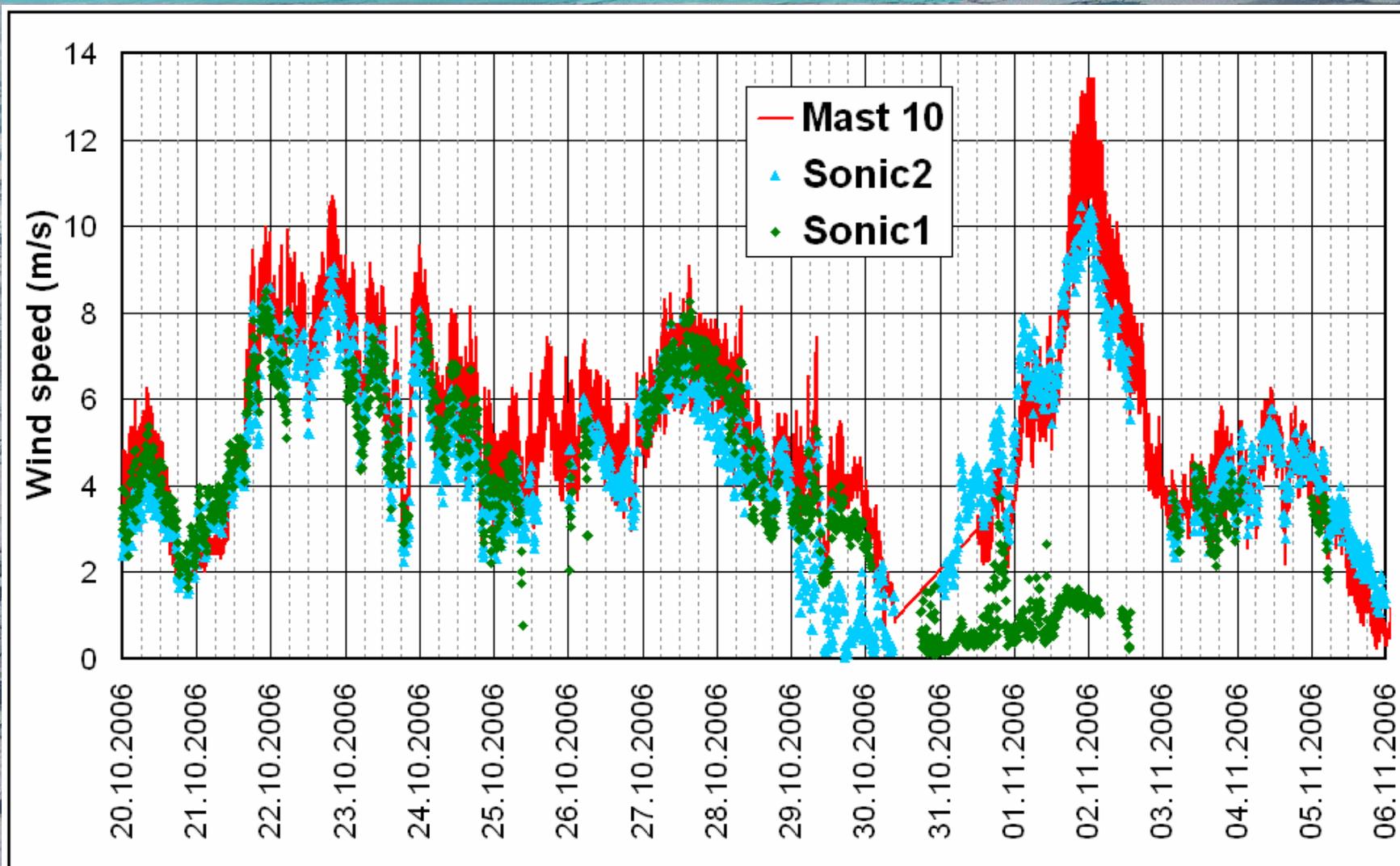
Temperatuur erinevatel meteomasti kõrgustel



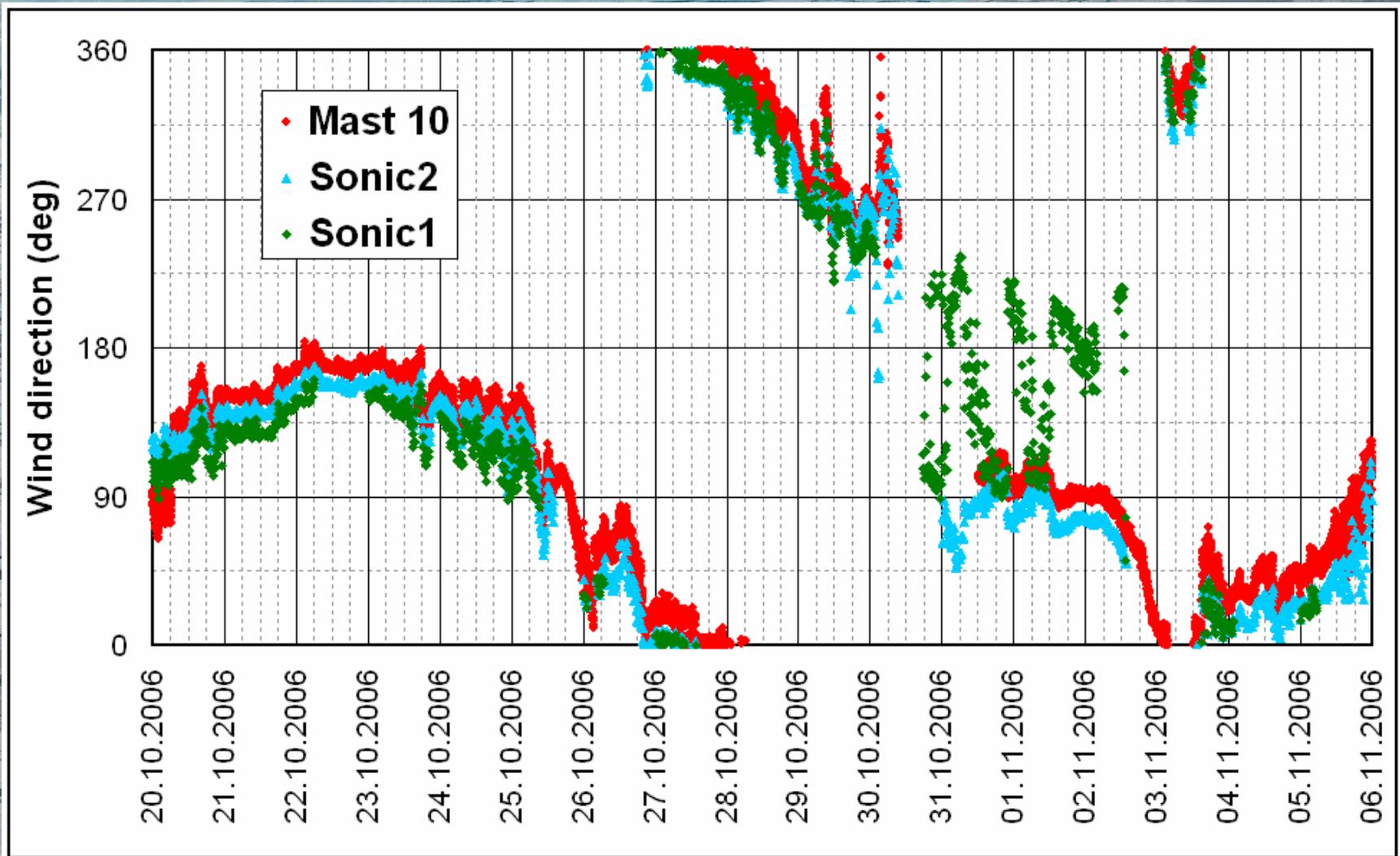
Temperatuur meteomastist ja sonikanemomeetritest



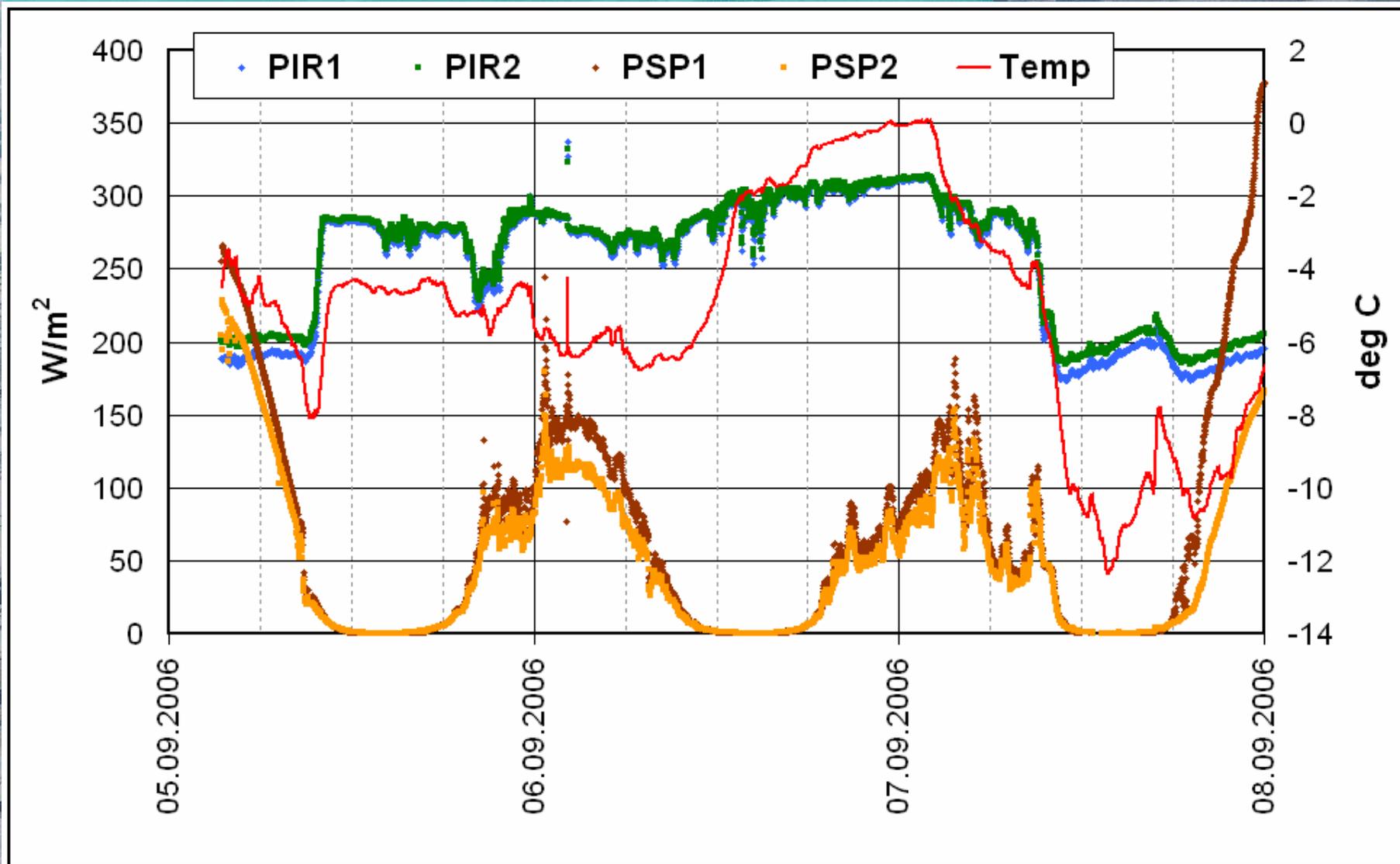
Tuule kiirus meteomastist ja sonikanemomeetritest



Tuule suund meteomastist ja sonikanemomeetritest



Kiirgussensorite võrdlus





Vaisala tetrasondi testimine Tõraveres



Vaisala tetrasondi testimine Tõraveres



Vaisala tetrasondi testimine Tõraveres



Tagasi TARA juurde TÜ-st:

Erko Jakobson 15. – 29. aprill 2007

Timo Palo 15. – ?? (juuli 2007)

Date: **22/03/2007**
Tara's location: **86° 22' 34" N**
130° 2' 24" E
Day of the mission: **199**
Drifting since 24h: **3.8 km**
Drifting since 7d: **22.5 km**
Temperature: **-29.5 °C**
Pressure: **1016.7 hPa**

Täna tähelepanu eest!

