



Activities at the **GRUAN** Site

Ny-Ålesund
78.9° N, 11.9 ° E

Marion Maturilli

***- Alfred Wegener Institute for Polar and Marine Research -
Potsdam, Germany***

GRUAN ICM-6, Greenbelt, MD, USA, 10 - 14 March 2014



Certification Ceremony on Site

Keeping Quality with Changing Staff

Implementation of CFH

Cooperation with METEOMET Project

Radiosonde Intensive Campaign (Sept.2013)

Certification Ceremony on Site



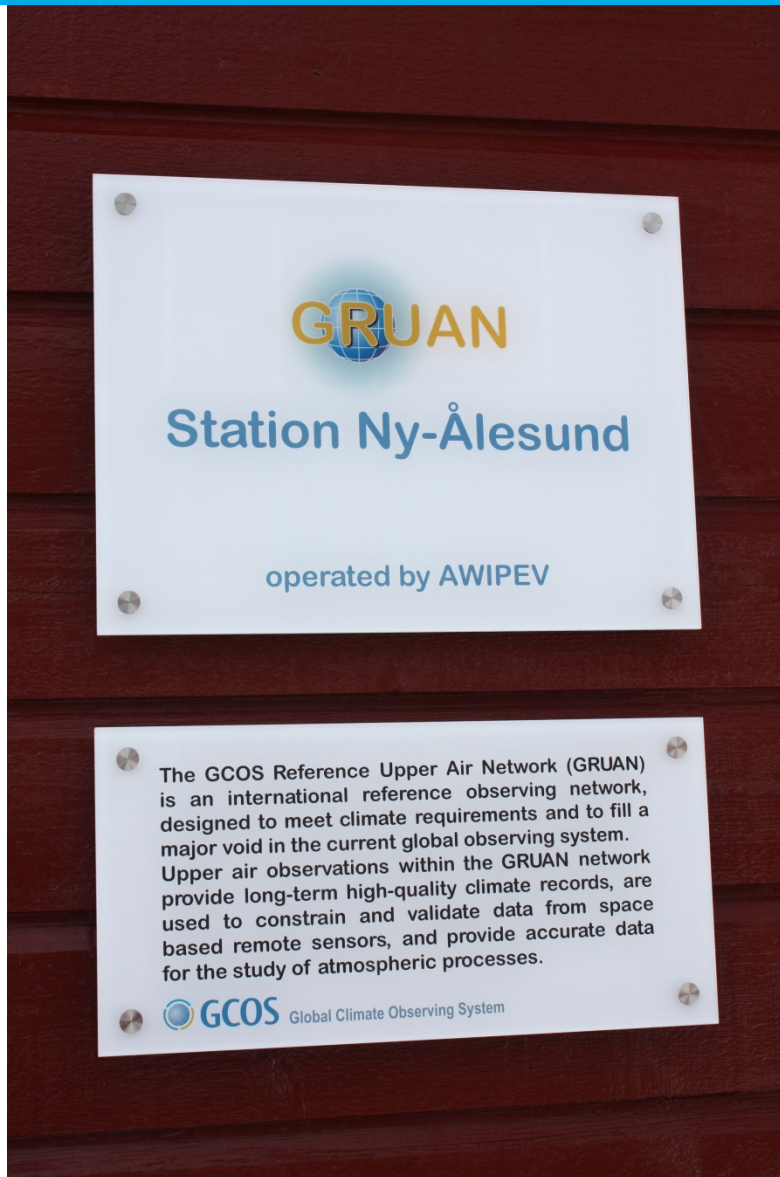
2013:
10th anniversary
of joint Franco-German station

official festivities in April included
a GRUAN site certification ceremony

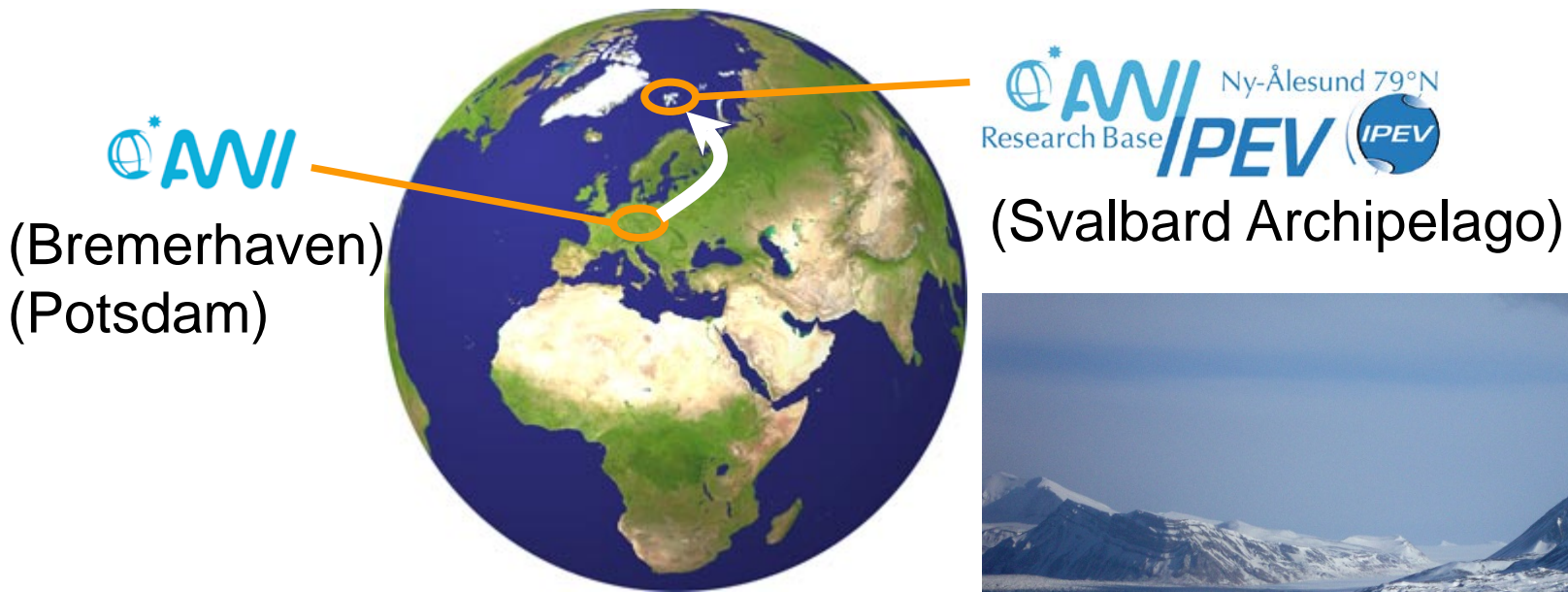
Certification Ceremony on Site



Certification Ceremony on Site



Keeping Quality with Changing Staff

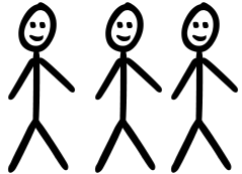


Remote Site

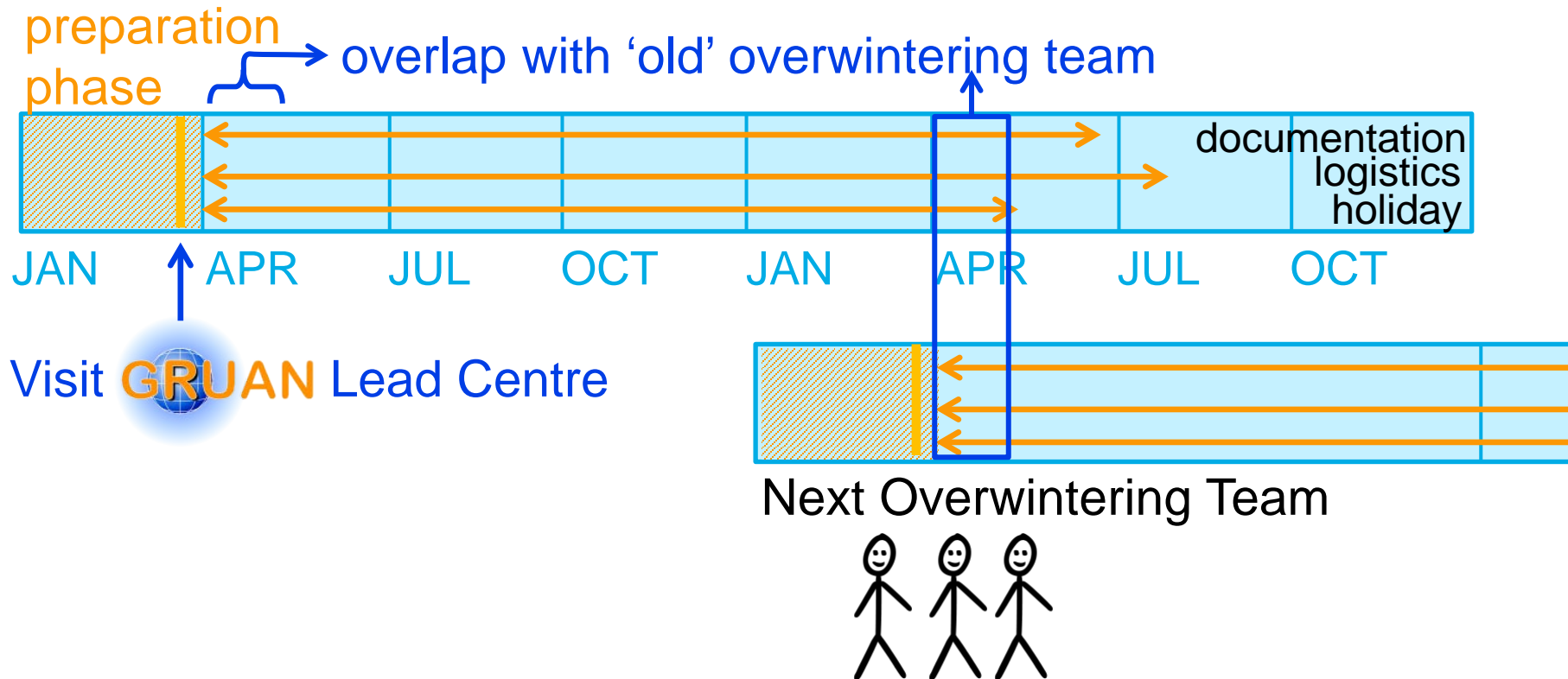
- no permanent inhabitants
- regular staff exchange

Keeping Quality with Changing Staff

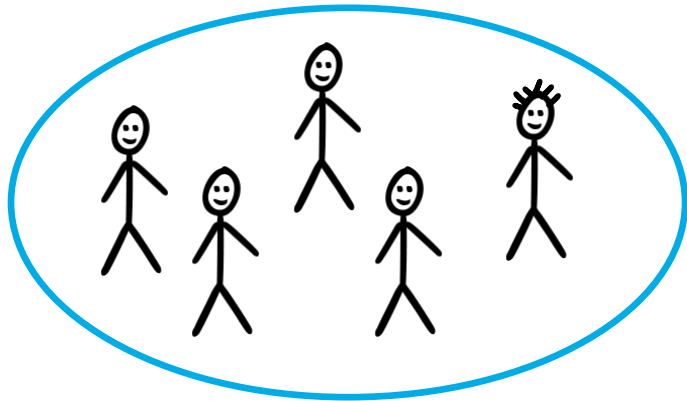
Overwintering Team



2-year contract



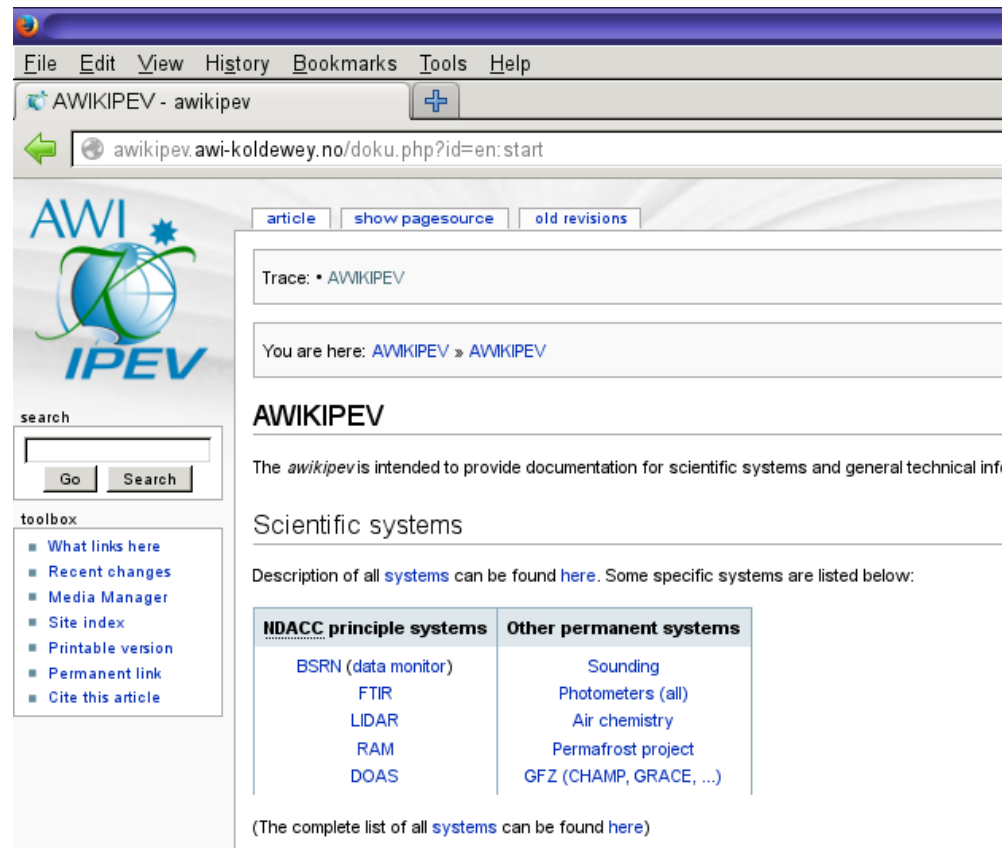
Keeping Quality with Changing Staff



Pool of permanent stuff

→ regular visits to the station

+ online documentation system
“awikipecv”



The screenshot shows a web browser window displaying the AWIKIPEV website. The browser's address bar shows the URL `awikipecv.awi-koldewey.no/doku.php?id=en:start`. The website features the AWI IPEV logo, a search bar, and a toolbox with links like 'What links here', 'Recent changes', and 'Media Manager'. The main content area includes a breadcrumb trail 'You are here: AWIKIPEV > AWIKIPEV', the title 'AWIKIPEV', and a description of the system. A table lists scientific systems, categorized into NDACC principle systems and other permanent systems.

NDACC principle systems	Other permanent systems
BSRN (data monitor)	Sounding
FTIR	Photometers (all)
LIDAR	Air chemistry
RAM	Permafrost project
DOAS	GFZ (CHAMP, GRACE, ...)

(The complete list of all systems can be found [here](#))

Implementation of CFH

→ Aug 2013 staff being trained at the  GRUAN Lead Center

in Ny-Alesund:

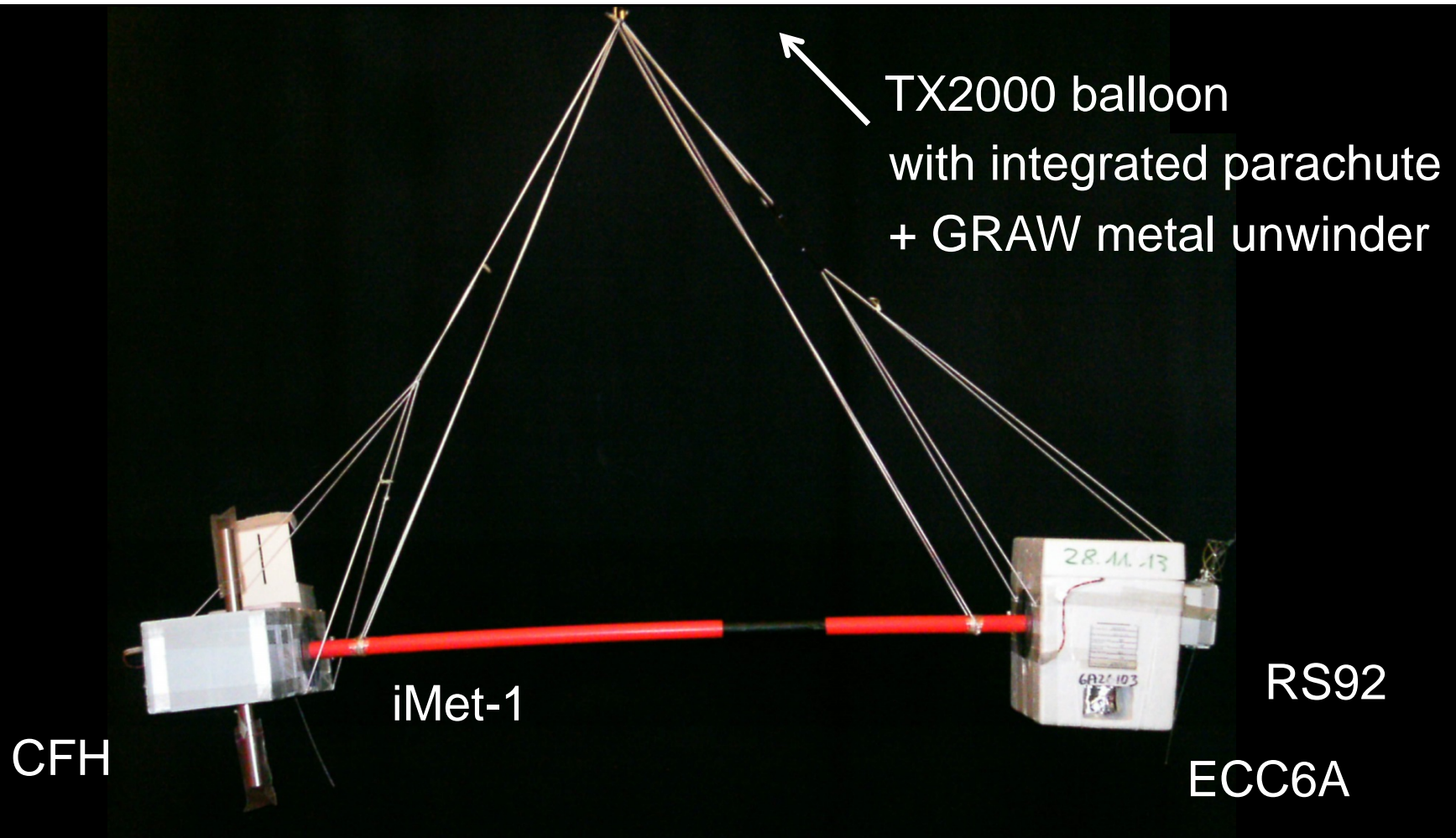
Aug/Sept update of detection software, ground equipment

9 Sep 2013 first test launch;
identification of problems on receiving site

4 Oct 2013 second test launch - successful

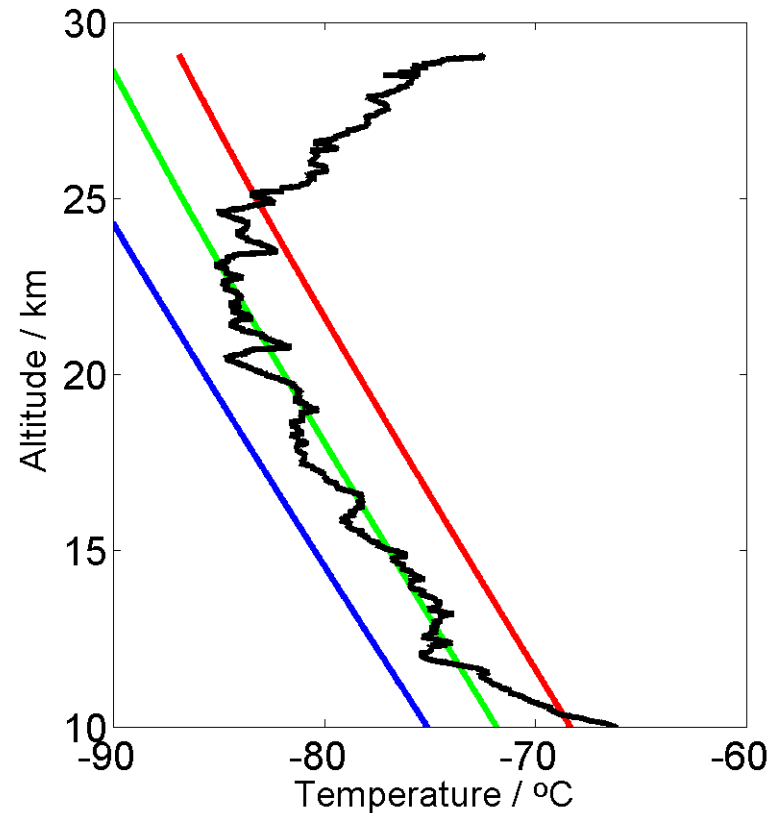
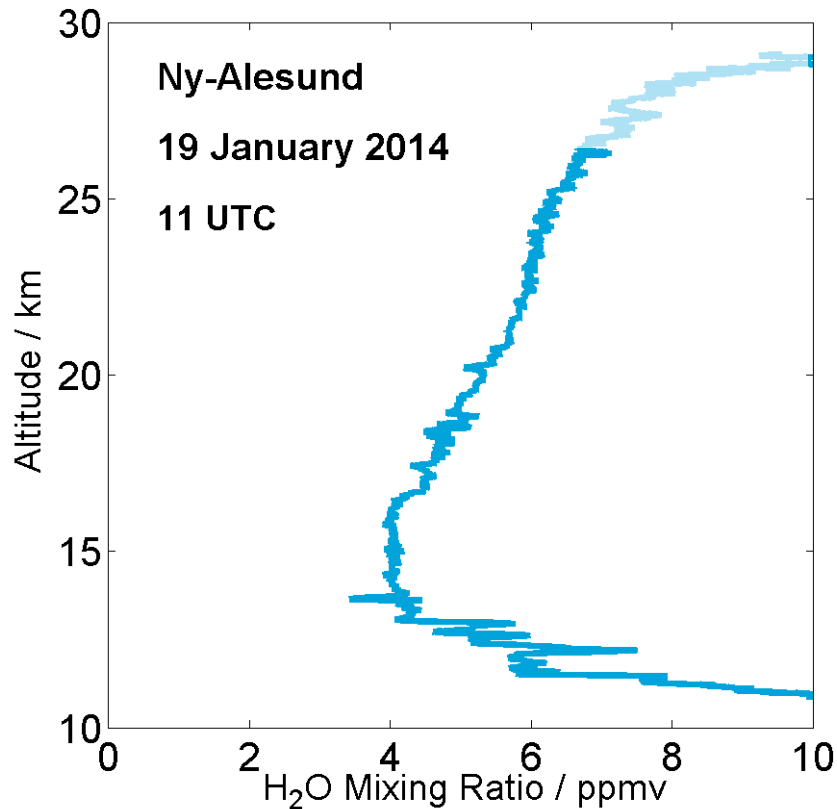
- solve logistic problems (cryogen)
- optimize payload construction
- document the standard procedure

Implementation of CFH



Implementation of CFH

19 Jan 2014 first “regular” CFH launch



→ scheduled: 1 CFH launch every 2 months



AWI

ALFRED-WEGENER-INSTITUT
HELMHOLTZ-ZENTRUM FÜR POLAR-
UND MEERESFORSCHUNG

WP3: Traceable measurement methods and protocols
for ground based meteorological observations

June 2014

calibration of met. sensors in Ny-Ålesund
with the mobile calibration chamber
developed in the frame of METEOMET

(Andrea Merlone + 2 people from INRiM)



Arctic Research Collaboration for Radiosonde Observing System Experiment (ARCROSE)

intensified radiosonde observations
at 3 central Arctic sites
(Ny-Ålesund, Tiksi, and the RV Mirai)



data assimilation
with the
Observing System Experiment
of the Earth Simulator



Radiosonde Intensive Campaign

Goals:

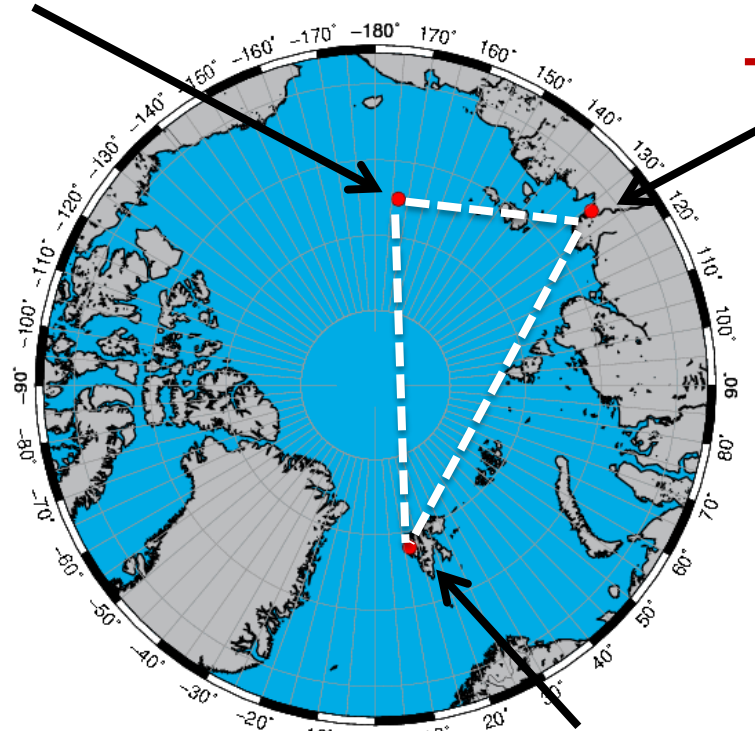
- ➔ better understanding of the Arctic atmospheric circulation
- ➔ enable improvement of both numerical weather prediction and reanalyses
- ➔ determine predictability and identify key sources of forecast errors in polar regions

Radiosonde Intensive Campaign



RV Mirai

8 x daily radiosonde
(00, 03, 06, 09,
12, 15, 18, 21 UTC)



Tiksi



2 x daily radiosonde
(00 and 12 UTC)

Ny-Ålesund



6 x daily radiosonde
(00, 06, 09, 12, 15, and 18 UTC)

September 2013

4 – 10

11 – 24

25 – 1 Oct



pre-campaign

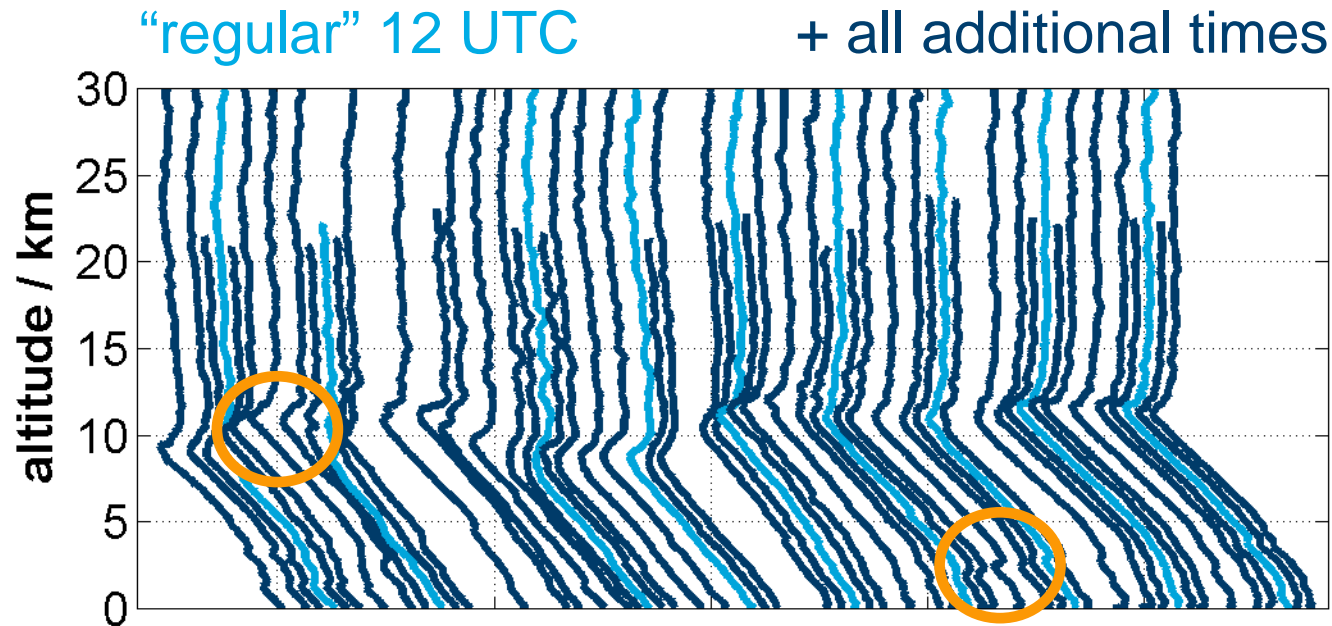
core

post-campaign

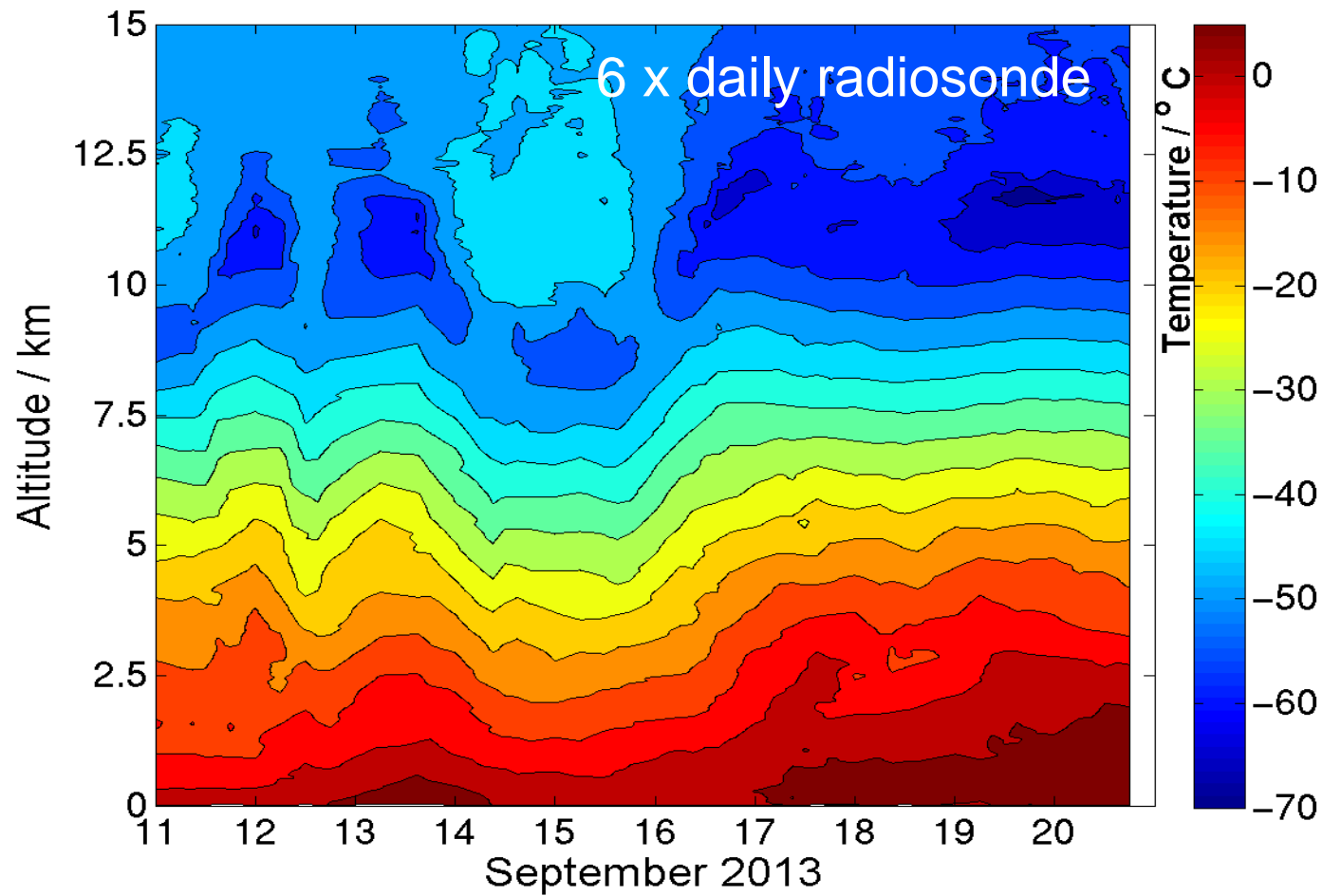
campaign

Radiosonde Intensive Campaign

Structure of temperature profiles 11 – 20 September 2013



Radiosonde Intensive Campaign



Summary



- ➔ ARCROSE campaign optimum data set
 - for local process studies
 - for different GRUAN task team subjects
- ➔ GRUAN related activities at Ny-Ålesund continue
- ➔ some instruments are queuing to get involved to GRUAN (e.g. microwave radiometer, lidar)
- ➔ “ready for take-off” with ozone sondes, CFH, GNSS as soon as they become official GRUAN products

