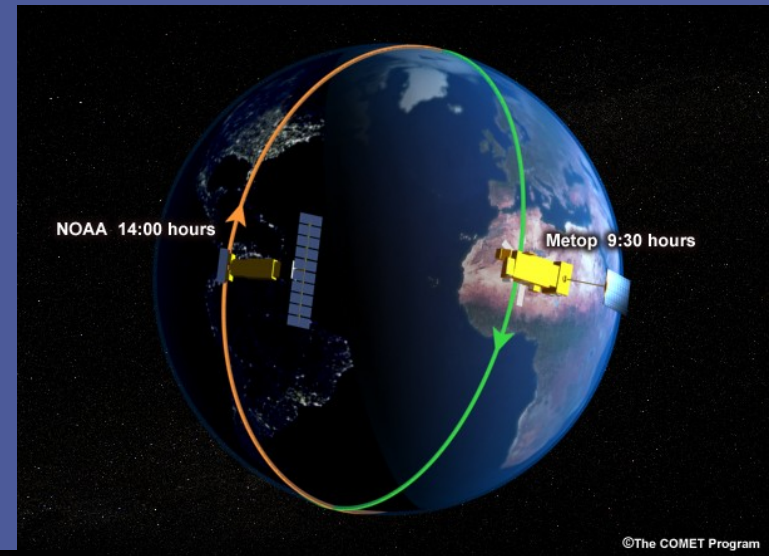


# The International Project Concordiasi



**METEO FRANCE**  
Toujours un temps d'avance

# The Concordiasi Goals

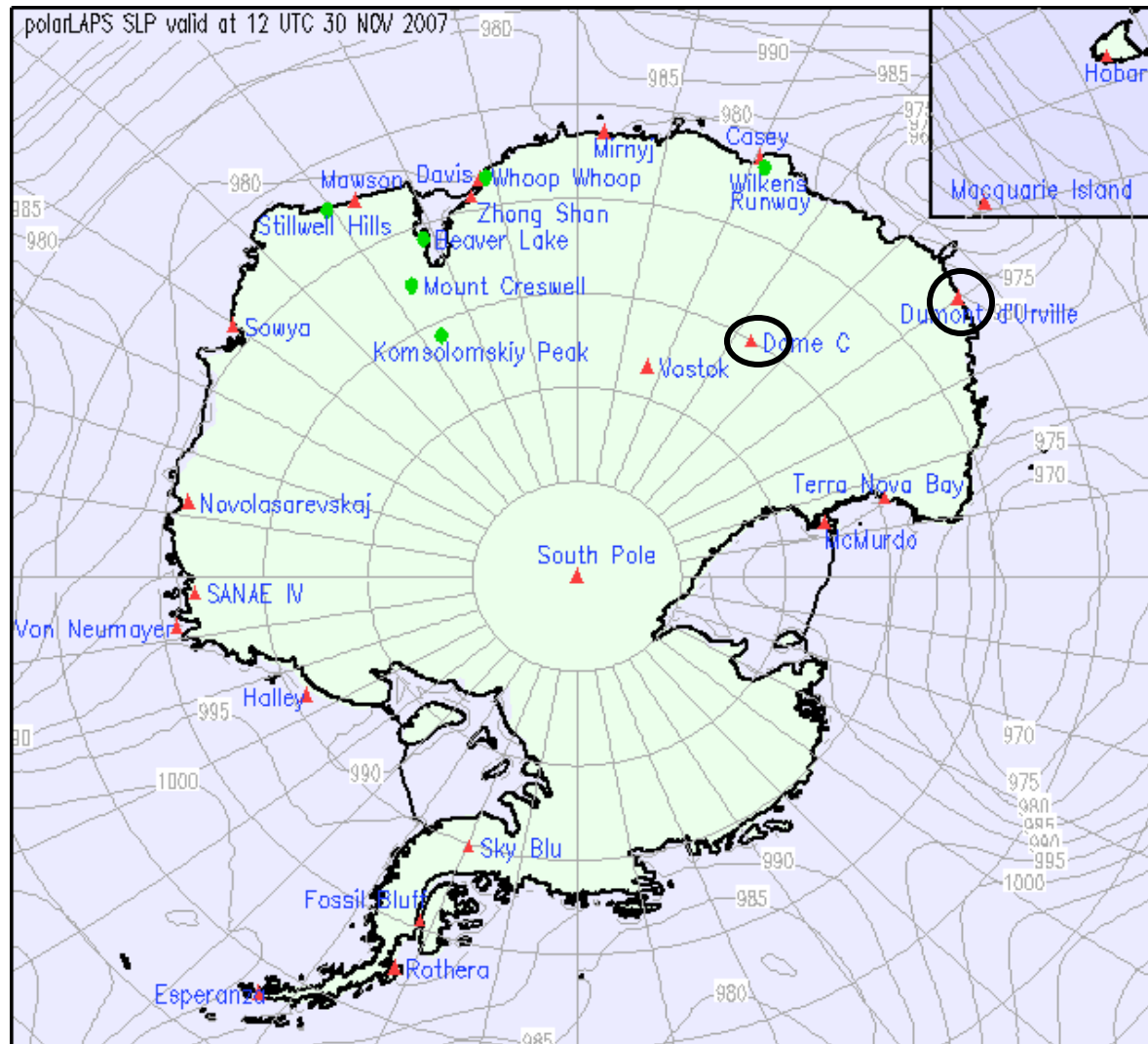
- To improve the assimilation of satellite data over the southern polar region, with an emphasis on the data provided by the IASI sounder.
- To improve understanding of the stratospheric ozone budget through examination of the interaction of ozone observations at flight level and stratospheric clouds, together with the improved characterization of the polar vortex.
- To evaluate the impact of better analyses and forecasts on ozone profile simulations in chemical transport models.
- To evaluate the impact of the large scale improvements on local analyses and forecasts at Concordia.
- To provide recommendations on the design of the global observing system over the southern polar region by determining the extent to which additional observations over Antarctica can improve the prediction of high impact weather over lower latitudes.

# Concordiasi Project: activity in 2008

- First part of the campaign: September 2008 to November 2008 by increasing the radiosonde launches at DomeC (75°S;123°E) and Dumont d'Urville (66,40°S;140°E).
  - Other major field campaign in Austral spring 2009 with drifting superpressure balloons, driftsondes, and stratospheric measurements.
  - Studies on the assimilation of satellite observations over Antarctica
  - Development of various instruments, testing of driftsondes in Seychelles, T-PARC, and preliminary strategy about dropsonde targeting
  - Environmental study performed by IPEV
  - Aurélie Bouchard at CNRM, Michael Town at LGGE, Met Student at GMAO in 2009
  - Website [www.cnrm.meteo.fr/concordiasi/](http://www.cnrm.meteo.fr/concordiasi/)
  - Data on [www.cnrm.meteo.fr/concordiasi-dataset/](http://www.cnrm.meteo.fr/concordiasi-dataset/)
  - ToR of CISC finalised and communication team set up
- 11/12/08 bouhhh
- BAMS paper in preparation



# Radiosonde launches in 2008



# 2008: Statistics on radiosonde launches

- Dome C:
  - 135 RS launches (additional ones at 0UTC).
  - Altitude reached: 20hPa (28km).
- Dumont d'Urville:
  - 157 RS launches (additional ones at 12UTC).
  - Altitude reached: 30hPa (24km).
- At each site, 2 launches when co-location with AIRS track and IASI swath (for information on clouds from the A-train) at 15UTC
  - DomeC: 10 Oct (clear), 27 Nov (Clear)
  - DDU: 1 Oct (clear), 13 Nov (Sc 1200m (3/8), As/Ac 2600m (7/8))
- Most data transmitted on GTS in real-time + High resolution soundings available on website



# Data on the website

- Non-protected access: data from GTS, both conventional and satellite (needs simple registration to access data)
- Protected access: high-resolution soundings

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### Data access

[Data policy](#)[Registration](#)

### Available datasets

[Real-time obs.](#)[Special obs.](#)

### Datas extractions

[Real-time obs.](#) [Special obs.](#) [Model data](#)

### Visualisations

[Real-time obs.](#) [Special obs.](#)

## Welcome to the dataset website of Concordiasi

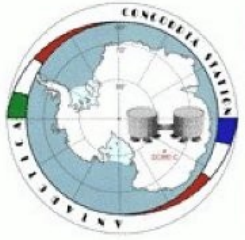

Within the framework of the International Polar Year (IPY), the [Concordiasi](#) field experiment takes place in Antarctica. The most outstanding goals are:

- To improve the assimilation of satellite data over the southern polar region, with an emphasis on the data provided by hyperspectral sounders, such as AIRS and IASI. The enhancements in the skill of weather predictions and accuracy of climate records resulting from such improvements will contribute to the IPY's legacy.
- To assess the improvements brought by these analyses and forecasts on chemical-transport models and on the fine-scale description of meteorological processes.
- To improve the understanding of the stratospheric ozone budget looking into the interaction of ozone observations and stratospheric nitric acid trihydrate (NAT) clouds, together with the improved characterization of the polar vortex.
- To advance the understanding of the Earth system by examining the two-way interactions between the climates of Antarctica and lower latitudes.

Concordiasi plans a field experiment during the Austral springs 2008 and 2009. The field activities are based on a constellation of up to sixteen long duration stratospheric balloons deployed from the McMurdo station. These high altitude balloons are able to drop dropsondes, launched on demand under a parachute and measuring atmospheric parameters over Antarctica. Some of the flights will be dedicated to chemistry and microphysics. They will carry flight-level instruments, including temperature, pressure and ozone sensors, particle counters and GPS receivers. Finally, additional in-situ measurements will include radiosoundings at a couple of sites, Concordia and Dumont d'Urville.

Data deployed in the context of Concordiasi, together with other meteorological data provided on the GTS over Antarctica are available on this website. These Concordiasi data are available using GTS, henceforth on, the web site key "Real-time Obs." They can be displayed as profiles. Moreover, full/complete profiles can be reached by "Special Obs". The access to these data is currently restricted to members of the project team.

# Data on the website

[News](#)    [Links](#)    [Contacts](#)    [Help](#)

Home > R-time obs. avail. > Synop

### Available Synop

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frequency

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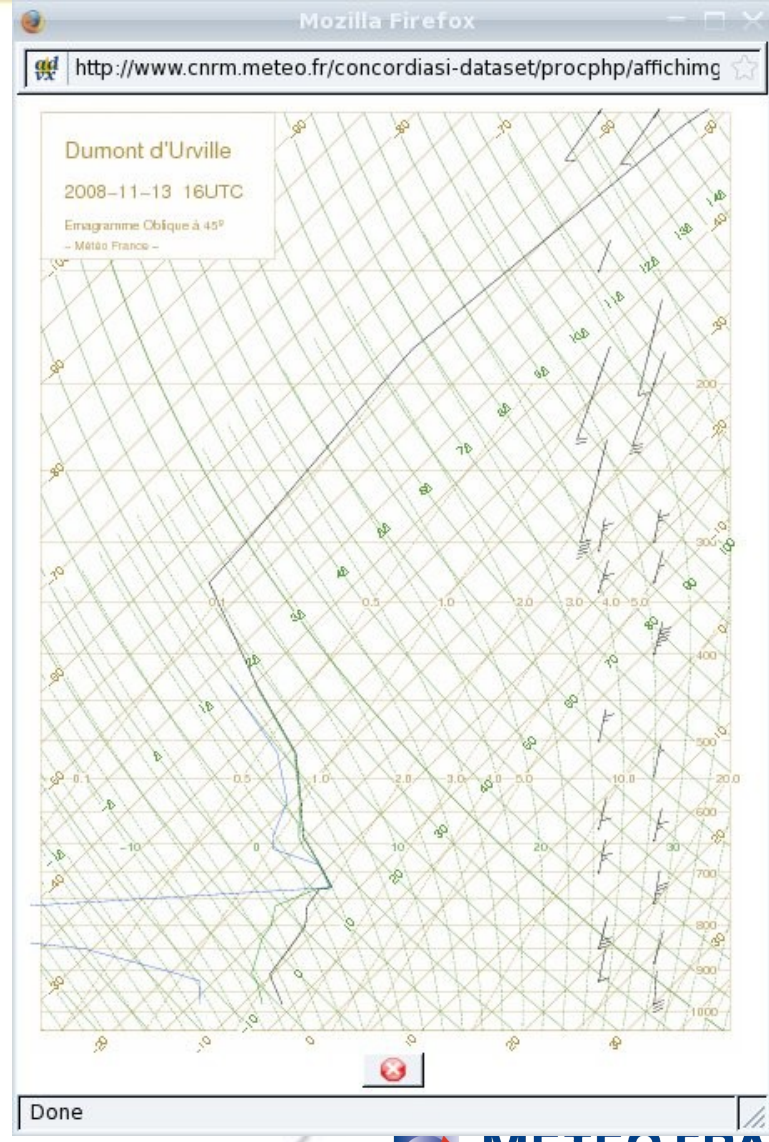
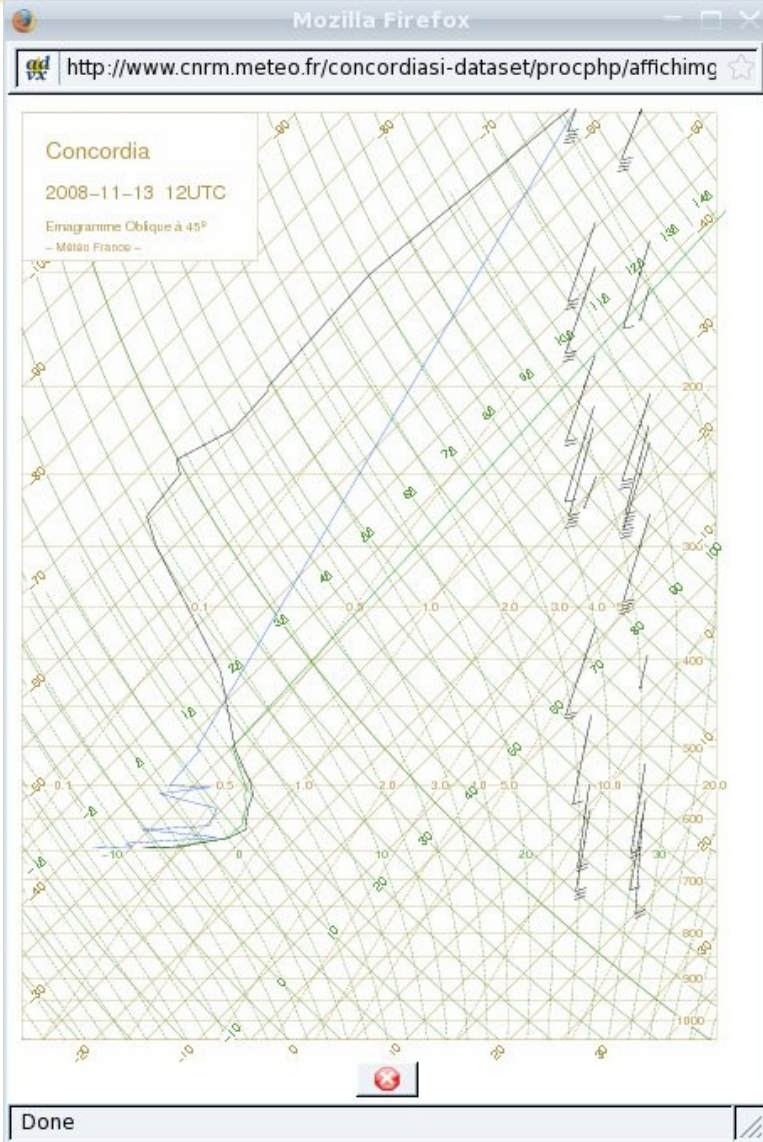
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Concordia -75.10 / 123.40 September 2008 freq. = 6h  
 <-- days -->

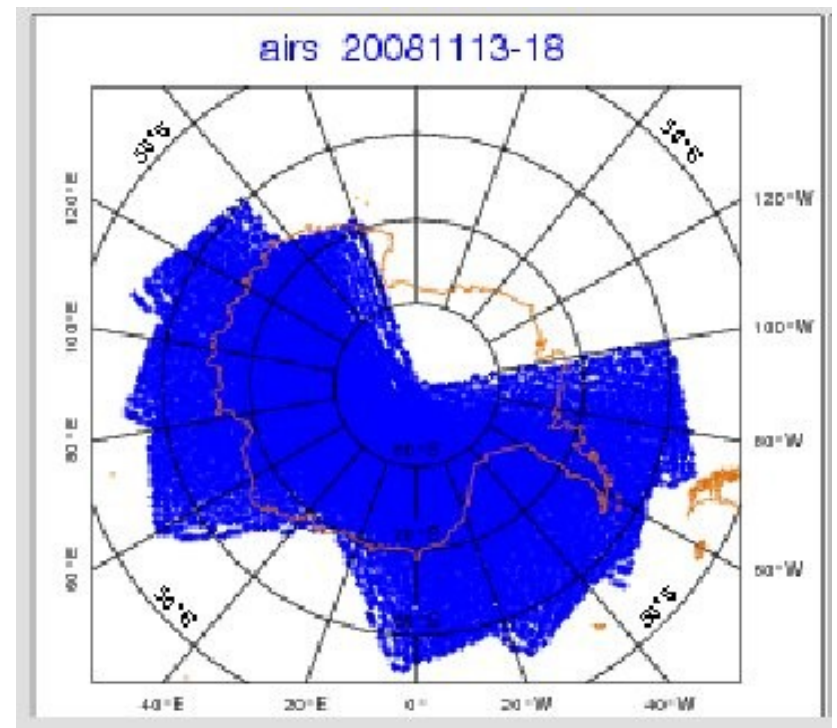
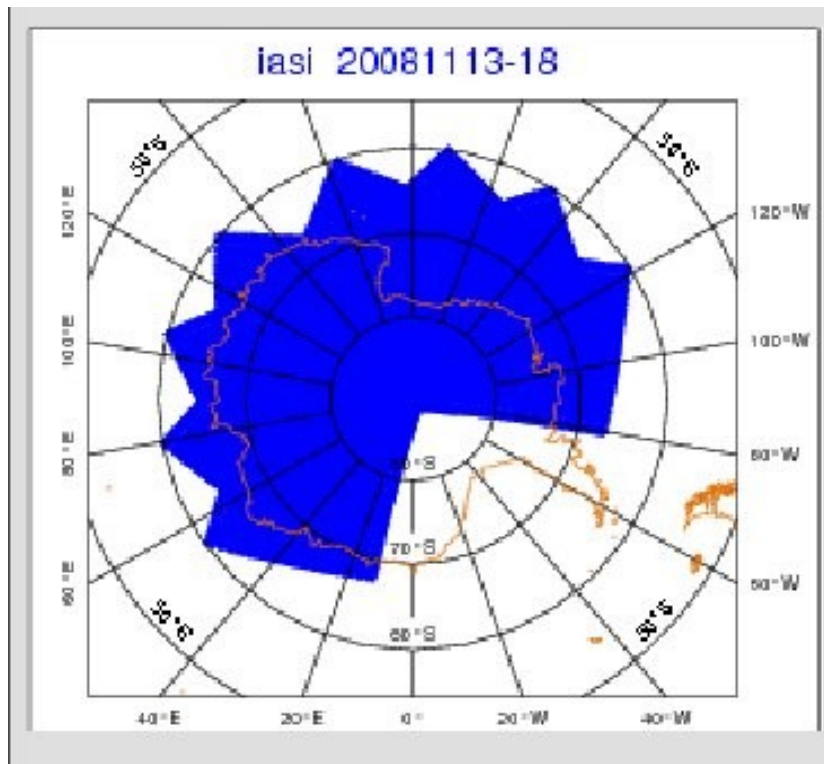
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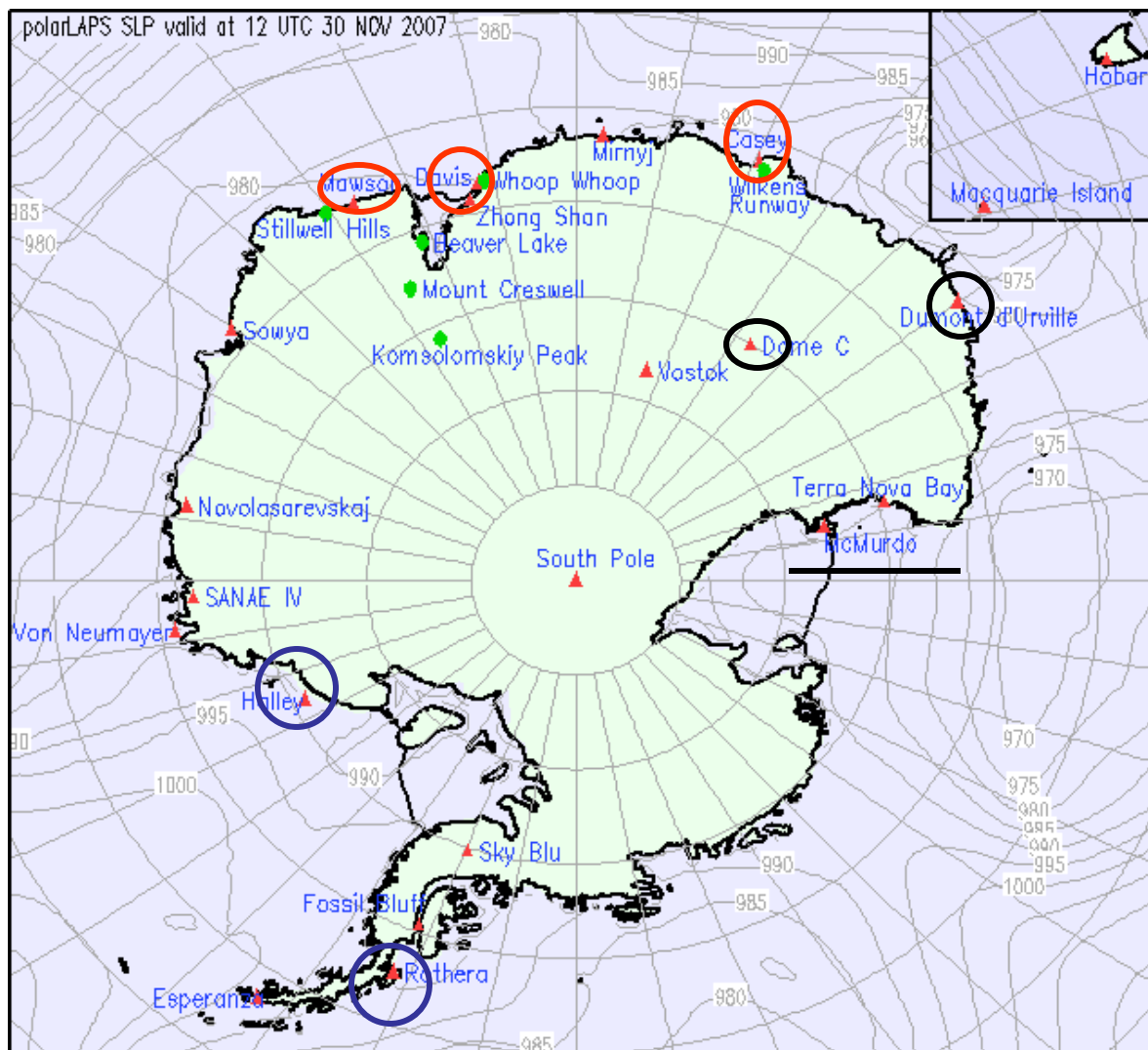
# Satellite data



# Radiosondes in 2009

Launches at various stations (possibly UK and Australia too)

to be synchronised with dropsonde releases



# BAMS paper

- Proposition accepted from Editor
- Update of proceedings from AMS/EUMETSAT conf (2007)
- Many contributions already
- Need to finalise early next year

