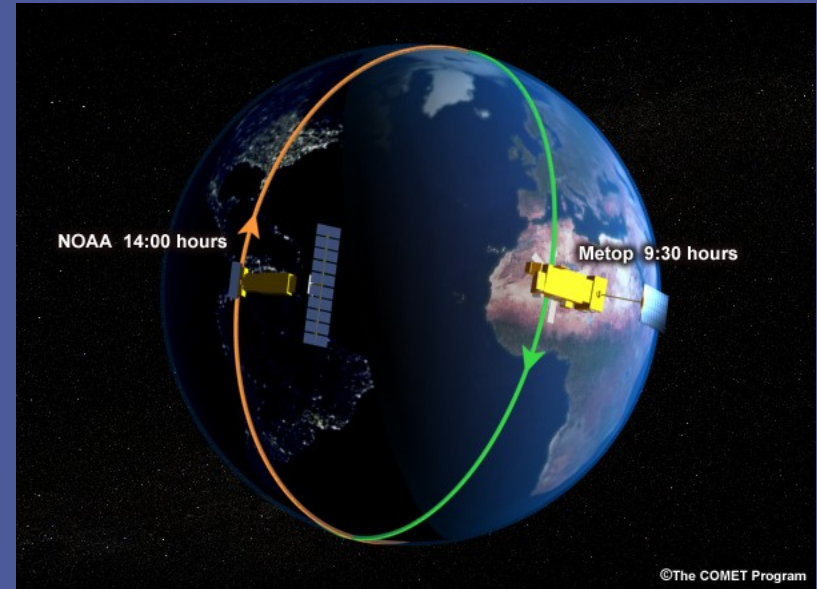


The International Project Concordiasi



The Concordiasi Experiment

Collaborating institutes

NSF, NCAR, U. Wyoming, Purdue U., LASP, UMBC/GMAO, UCLA	USA
CNES, IPEV, CNRS, LGGE, LMD, Météo-France	France
PNRA	Italy
ECMWF	International
Bureau of Meteorology Research Centre	Australia

Concordiasi within IPY

Belongs to the THORPEX-IPY cluster (N°121 in IPY)

« Improved numerical weather forecasting and climate simulations by exploitation of in-situ, airborne remote-sensing and satellite data, advanced modelling systems and basic research into polar processes and into polar-global interactions. »

Most outstanding goals

- To improve the assimilation of satellite data over the southern polar region, with an emphasis on the data provided by the new 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.

Field experiment Sept-Nov 2008

- 150 radiosoundings from Concordia, 75 from Dumont d'Urville
- In situ measurements at Concordia
- Stratospheric balloons
 - Meteorological sensors, ozone sensors
 - Particle counter to study stratospheric clouds
 - GPS radio-occultations
- 12 driftsondes with 50 dropsondes in each

<http://www.cnrm.meteo.fr/concordiasi/>



University of Colorado Ozone (UCOZ)

*On behalf of
Linnea Avallone & Lars Kalnajs*

22/06/07



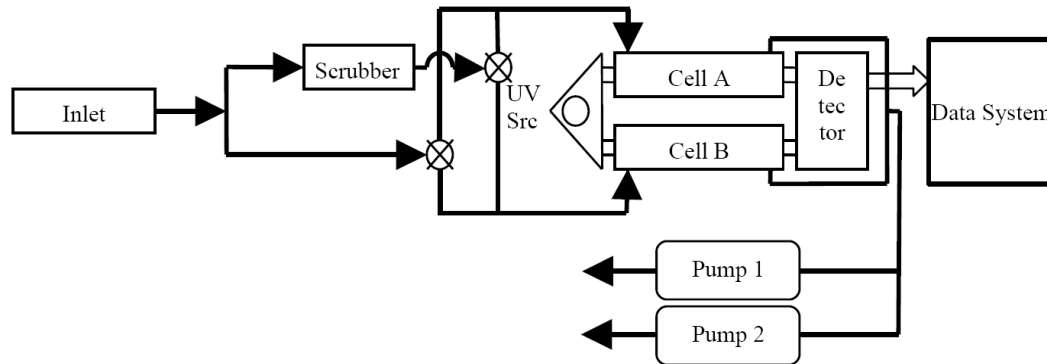
METEO FRANCE
Toujours un temps d'avance

UCOZ Science Goals

- To make quasi-Lagrangian measurements of stratospheric ozone during peak ozone-loss period
- To analyze observations in context of chemical loss rates and to provide constraints on halogen-catalyzed ozone loss [with M. Rex/R. Schofield]
- To collaborate with UWyo group to look at relationship between PSC processing and ozone loss [with T. Deshler]
- To measure ozone during vortex break-up to help quantify extent of mixing processes

UCOZ Instrument

- Standard dual-cell design for UV absorption instruments
- Hg lamp replaced with UV LED – significant power savings and increased longevity
- Fully redundant optical and flow systems



UCOZ Instrument Characteristics

Weight	< 3 kg
Dimensions	60 x 15 x 12 cm
Power consumption	< 3 W
Cell path length	50 cm
Time resolution	1-10 min
Accuracy (2σ)	5 - 7%
Precision (2σ)	1 ppb @ 10 min

UCOZ Status

- Decision on NSF funding still pending – budget is not known as a result of Congress's failure to authorize spending (yet)
- Moving forward with breadboard instrument using internal funds – expect this to be completed by end of January
- Intend to furnish at least two instruments, regardless of NSF funding
- Without NSF funding, travel will be impossible