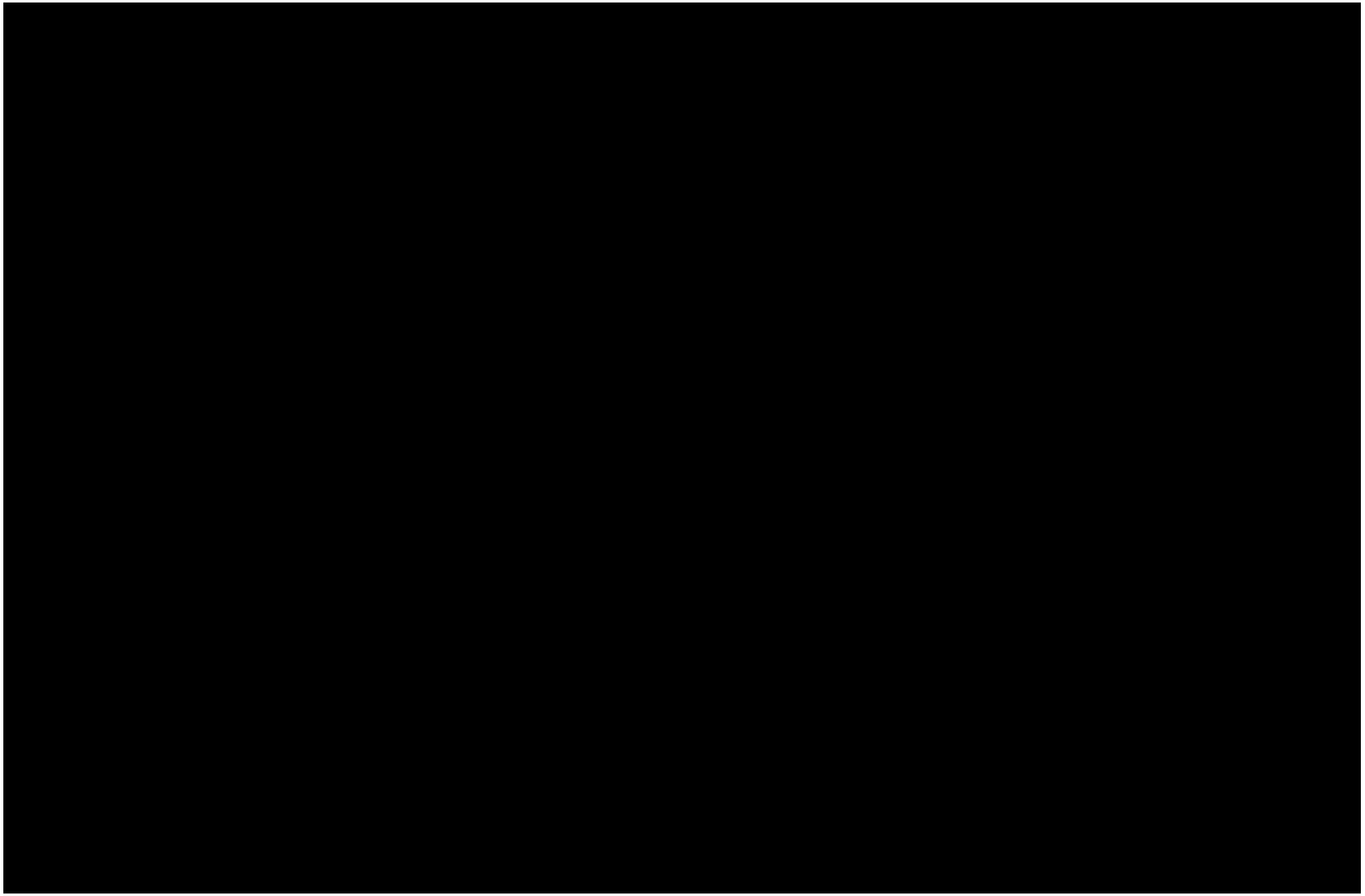
Additional Planned POLARCAT Activities During ARCTAS Deployments.

Thanks to Kathy Law, Hans Schlager, and Andreas Stohl/John Burkhart for Information

CNRS April Campaign with ATR 42
Nominal Dates 27 March - 13 April
Possible overflights of NOAA ship??



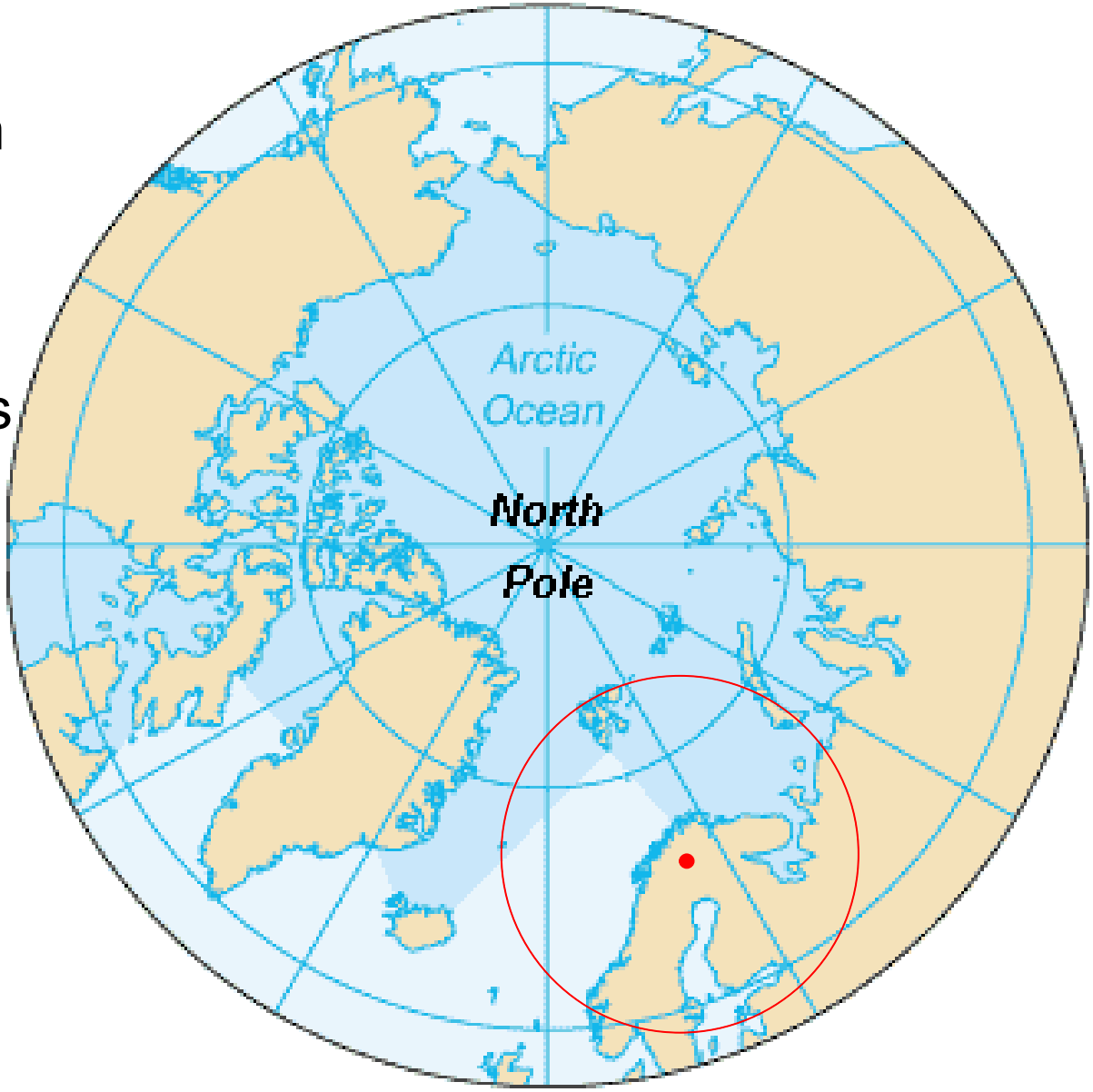
Spring 2008 ATR-42 Instrument Fit

Instrument	**Parameter**	**PI**
2 pods microphysics	CPI, 2D-C, 2D-P Nephelometer polaire FSSP-100	LAMP (JF Gayet) + SAFIRE
Radar Rasta	Profiles cloud reflectivity	CETP (Jean Paul Vinson)
Lidar LNG	Profiles aerosols/clouds	DT+SA (F. Blouzon)/J Pelon
2 racks microphysics/ Aerosol CVI inlet	In-cloud aerosols LAMP	(A. Schwartzenboeck)
MOZART	O_3, CO	SAFIRE(P. Nedelec)
Microphysics	Gerber (H2O liq) and Netzorov (H2O liq/ice)	SAFIRE
PCASP	Size, aerosol	SAFIRE
Radiation	UV, vis, IR	SAFIRE
Aircraft parameters	Met. variables, position	SAFIRE

DLR Falcon will also be in Kiruna in April.

Current dates 1-15 (good overlap with our time in Thule).

They have much longer range than ATR, likely to visit ship?



DLR POLARCAT Spring/Summer Experiment 2008

Falcon trace gas instrumentation (PI: Schlager)

Chemical species	Technique
O_3	UV absorption
H_2O	Lyman - alpha
CO	VUV fluorescence
CO_2	IR absorption
HCHO	Hantzsch reaction
NO,	CL (gas-phase)
NO_2	CL (liquid)
NOy	CL + reduction converter
HNO_3	CIMS (IT)
PAN	TD-CIMS
SO_2	CIMS (IT)
PFC	GC, CIMS

DLR POLARCAT Spring/Summer Experiment 2008

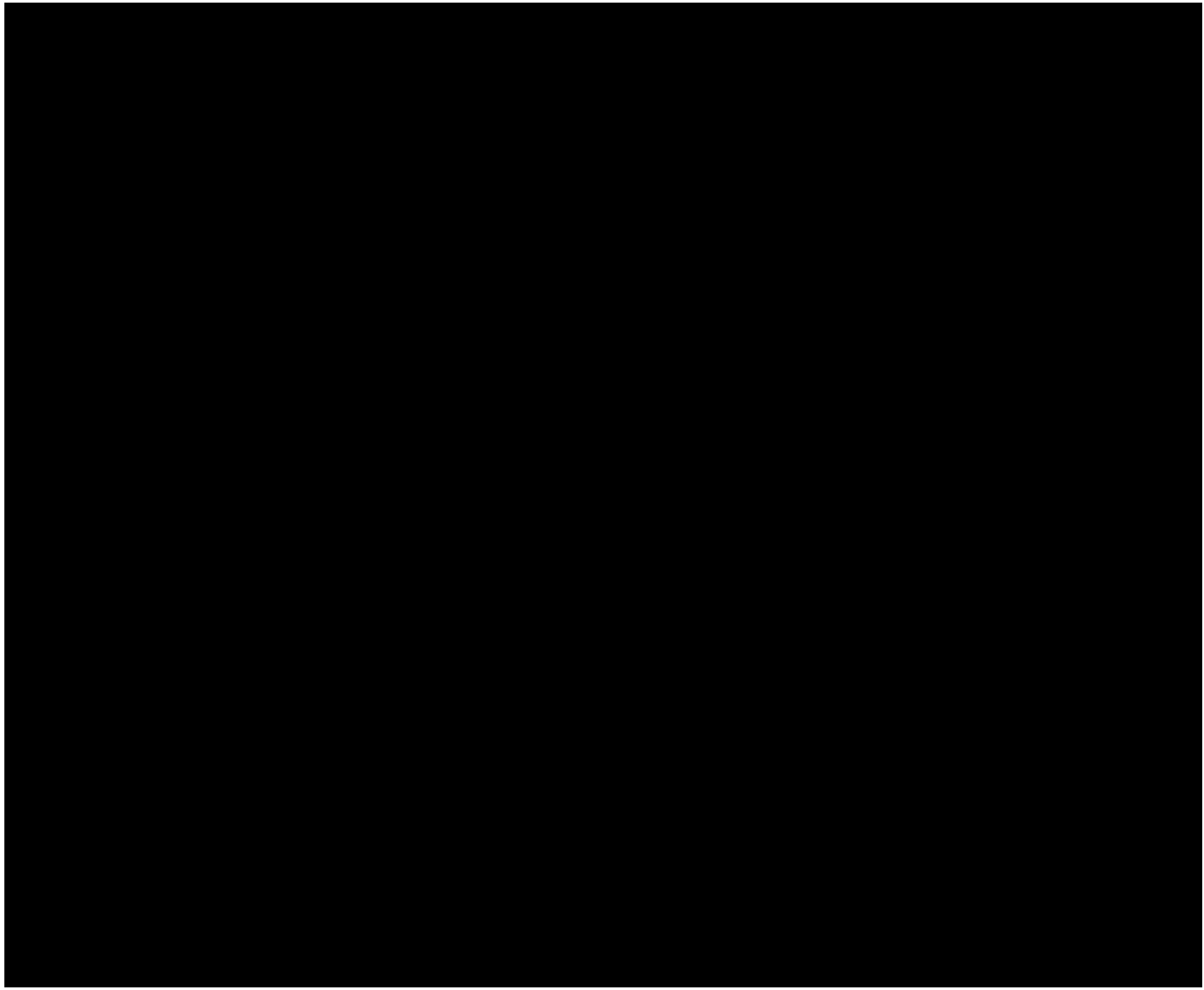
Falcon aerosol instrumentation (PI: Minikin)

Parameter	Technique
Nucleation/Aitken mode particle size distribution, non-volatile particle fraction	6-channel CPC system (unheated, heated)
Accumulation/Coarse mode particle size distribution	DMA, Aerosol spectrometer probes (PCASP-100X, FSSP300)
Aerosol scattering coefficient	Integrating nephelometer

CNRS and DLR will be in Kanger approx. 30 June till 18 July.

Falcon payload will be same as in spring.

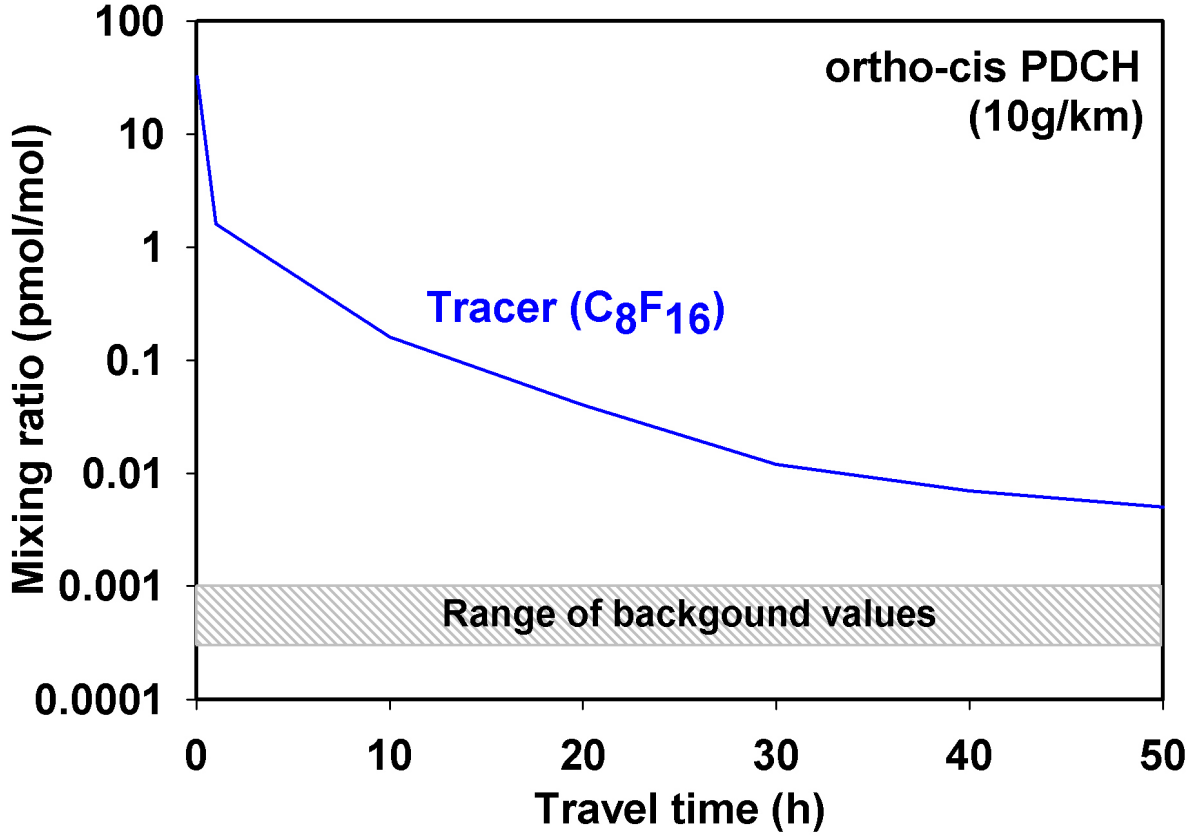
ATR42 instruments modified a little.



Summer 2008 ATR-42 Instrument Fit

Instrument	**Parameter**	**PI**
Lidar ALTO	O_3 profiles and backscatter	SA (C. Laqui)/ G. Ancellet)
Lidar LNG	Aerosol profiles	DT+SA (F. Blouzon) : J. Pelon
2 racks aerosol (community aersosol inlet) + 1 rack control	Size distribution, number, filters, nephelometer 3l	LAMP (A. Schwartzenboeck)
Aerosol Mass Spectrometer (AMS)	Aerosol composition	MPI Mainz/ U. Mainz (S. Borrmann, J. Schneider)
MOZART	O_3, CO	SAFIRE (P. Nedelec)
Microphysics	FSSP 300, 2DC	SAFIRE+LAMP (JF Gayet)
PCASP	Aerosol size distribution	SAFIRE
radiation	UV, visible, IR	SAFIRE
Aircraft parameters	Met. variables, position	SAFIRE

Estimated dilution of a PFC tracer in the upper troposphere

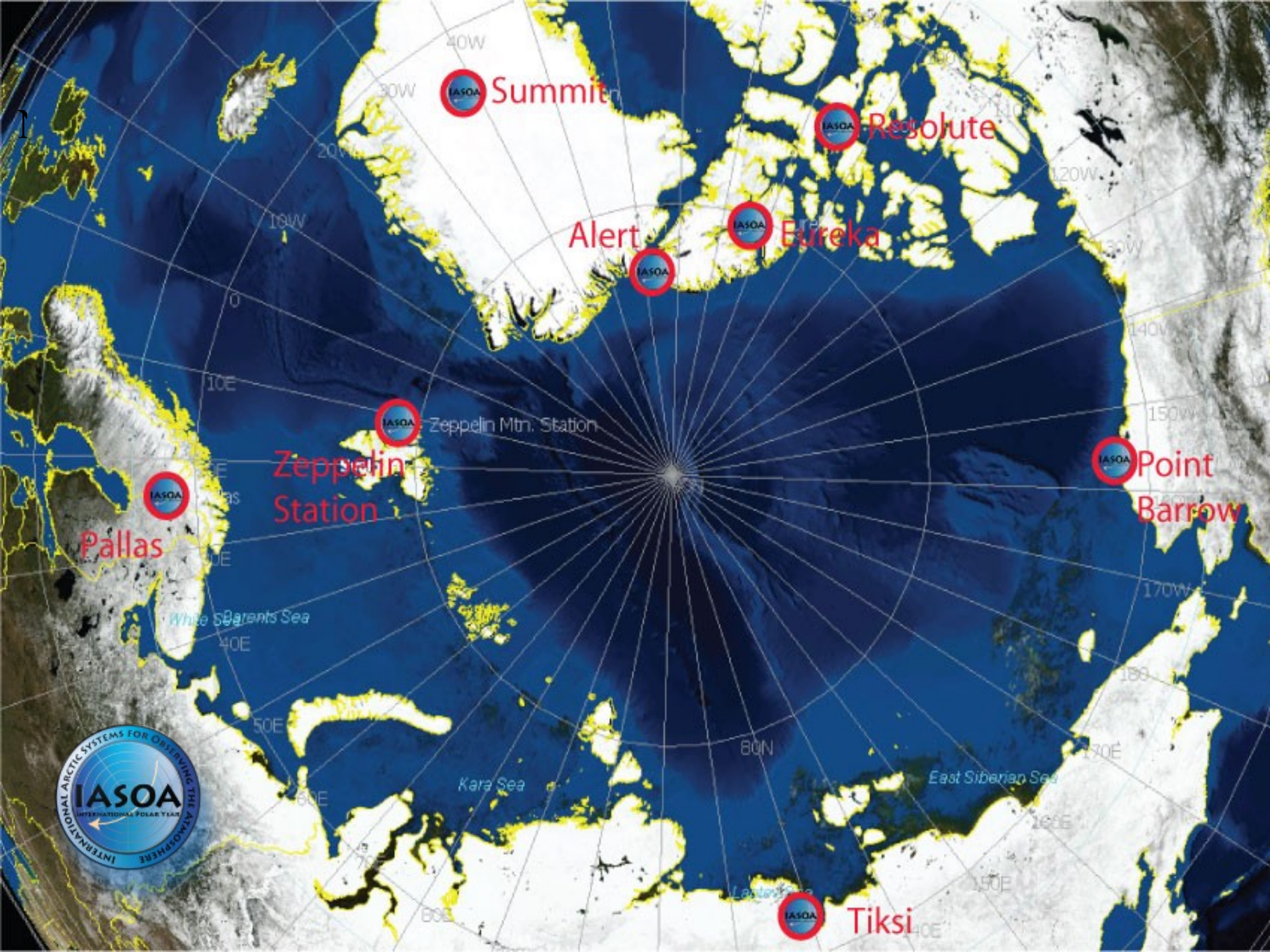


DLR is planning to tag airmasses, definitely fire plumes and maybe also Haze layers. Would we want to try to find the label? Perhaps part of summer suitcase??

YAK: CNRS and NILU are collaborating with Russians to conduct 2-weeks of sampling from an Antonov-30 in July. Objective is to sample Siberian fires, setting up “Lagrangian” opportunities for the rest of us to the east.

Summer 2008 YAK Instrument Fit

Instrument	Parameter	PI
Condor NDIR in situ (modified LiCor)	CO_2	LSCE (Ramonet, Paris)
CO in situ gas filter correlation (modified Thermo)	CO	LA (Nedelec)
O_3 in situ UV absorption (modified Thermo)	O_3	LA (Nédélec)
Fine aerosols particle counter	aerosol density conc. 3-70 nm & 70- 200 nm	IAO (Arshinov)
Magee Inc Aethalometer TI23	BC	IAO (Arshinov)
Hycal IH3602 C, other parameters	Ptu, wind	IAO (Arshinov


Summit
Resolute
Alert
Eureka
Zeppelin Mtn. Station
Zeppelin Station
Pallas
Point Barrow
Tiksi
Barents Sea
Kara Sea
East Siberian Sea
80N
40W
30W
20W
10W
0
10E
40E
50E
80E
120W
140W
150W
170W
170E
150E
IASOA
INTERNATIONAL ARCTIC SYSTEMS FOR OBSERVING THE ATMOSPHERE
INTERNATIONAL POLAR YEAR