
**Activities in Ny-Ålesund
conducted by the
Department of Applied Environmental
Science
Stockholm University, Sweden**



Projects 2009/2010

- Monitoring of CO₂ and aerosol particles at the Zeppelin station
- ARCFAC (The Arctic Aerosol Chemical Composition and its Role for Cloud Formation)
- GRACE (The Green House Arctic Ocean and Climate Effects of Aerosols)



Monitoring



Responsible scientist:

Dr. Peter Tunved

Institute for Applied Environmental science (ITM), Stockholm University

peter.tunved@itm.su.se



Research assistant:

Tabea Hennig

Institute for Applied Environmental science (ITM), Stockholm University

tabea.hennig@itm.su.se



Technician:

Birgitta Noone

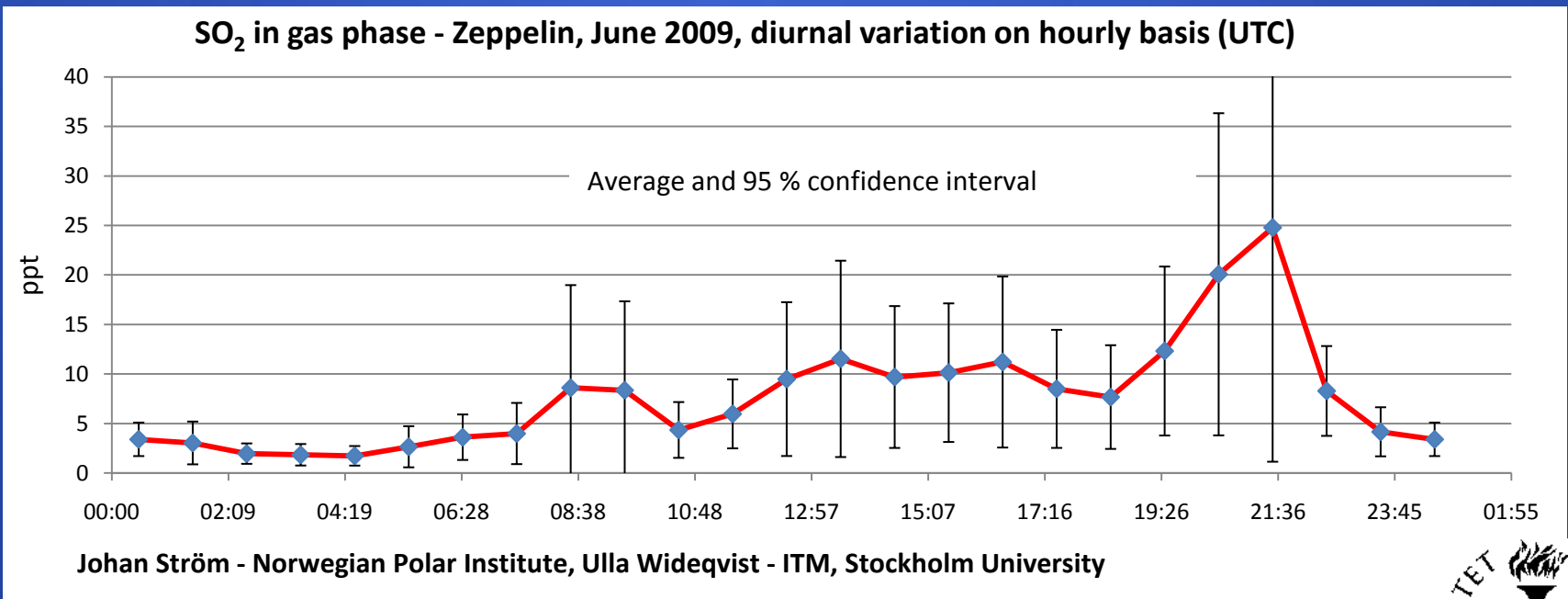
Institute for Applied Environmental science (ITM), Stockholm University

birgitta.noone@itm.su.se



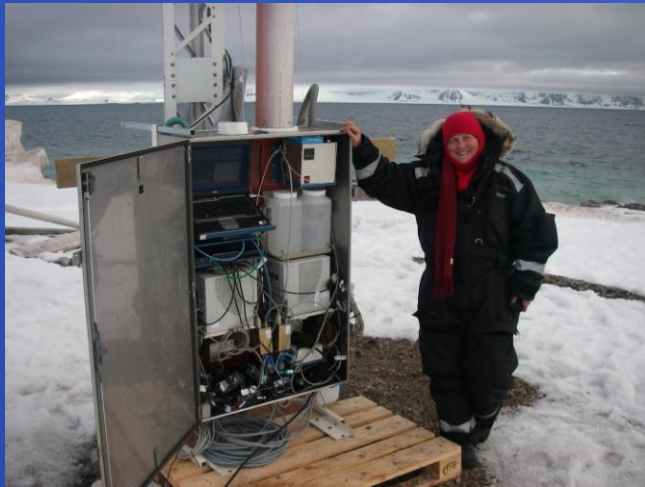
ARCFAC

- Perform highly temporally resolved observations of SO₂ in the gas phase.
- Provide data to address the question about the origin of sulphur in the Arctic.



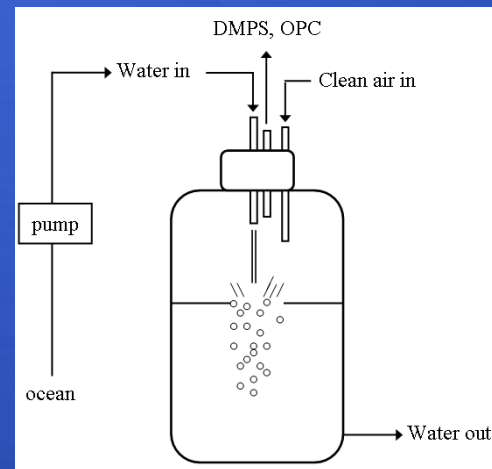
GRACE

Assess the effects of decreasing sea ice upon aerosol and cloud climate forcing.



- Determination of gas and aerosol fluxes by measurements of the CO₂ and H₂O concentration, particle number concentration, and particle size distribution.

- Study aerosol emission from ocean from bubble bursting process.
- Investigation of particle size distribution and volatility of the aerosol particles.



Visits to Ny-Ålesund

Project	Person	Date	Time
Monitoring	Birgitta Noone	2009/05/18 to 2009/06/02	3.5 weeks
		2009/11/16 to 2009/11/24	
	Tabea Hennig	2009/05/18 to 2009/06/02	3.5 weeks
		2009/11/16 to 2009/11/24	
Peter Tunved	Spring 2009	1 week	
ARCFAC	Ulla Widequist	May/June 2009	6 weeks
GRACE	Monica Mårtensson	Summer/autumn 2009	7 weeks
		February 2010	2 weeks
	Kai Rosman	Summer/autumn 2009	4 weeks
	Julia Zabori	July 2009	3 weeks
		February/March 2010	2 weeks
	Radovan Krejci	Summer 2009	1 week
		February/March 2010	3.5 weeks
	Annica Ekman	February/March 2010	2 weeks



Outlook summer 2010



- Installation of new inlets that are especially designed for aerosol measurements under extreme weather conditions.
- Installation of a DMPS systems to measure ultrafine aerosol particles.