

# NORPAC-2005

-Progress report  
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## Activities at Atmospheric Science, GU

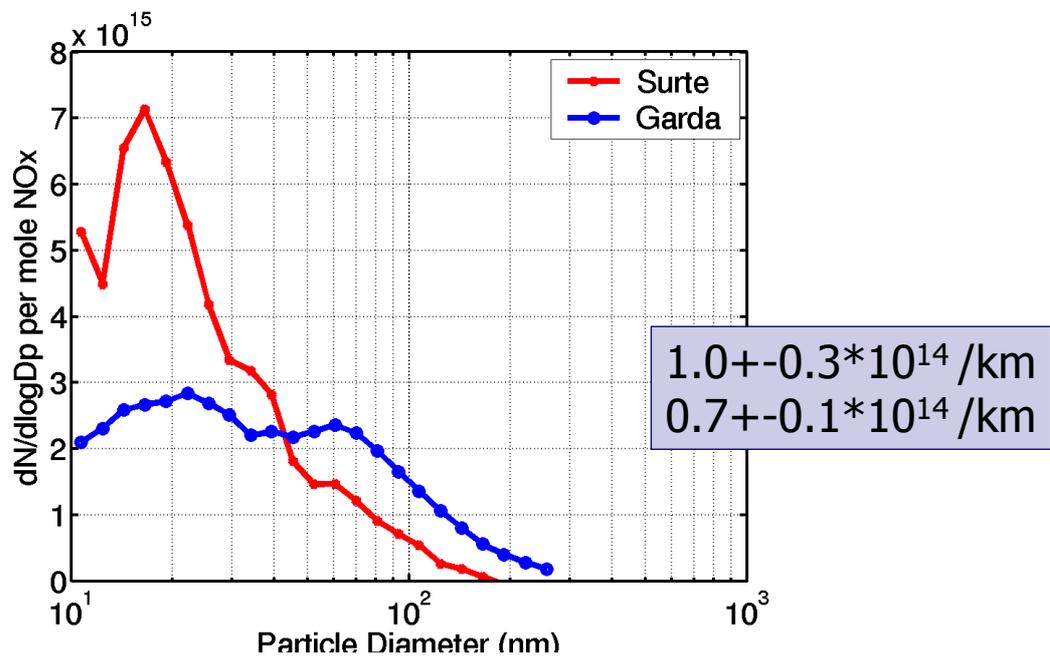
- Field Measurements
  - Emission Factors
  - Göte-2005
- Modelling
  - Vapour pressure parameterisation
  - Cloud processes
- Technique development
  - Single particle detectors
  - Aerosol Mass Spectrometer
- Laboratory investigations
  - Secondary Organic Aerosol formation and properties
  - Ice nucleation

# Emission ratio equation

$$E.R. = \frac{UFP_{emitted}}{NOx_{emitted}}$$

$$Conc_{emitted} = Conc_{traffic} - Conc_{background}$$

# Emission factor at road side





# GÖTE-2005 The sites

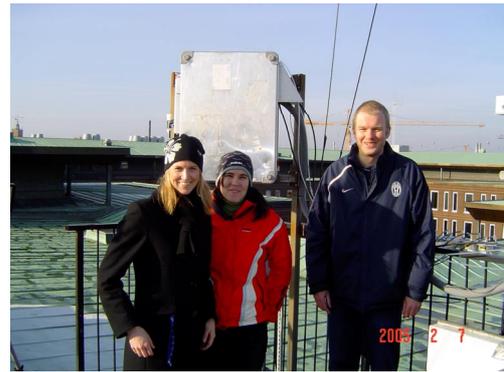
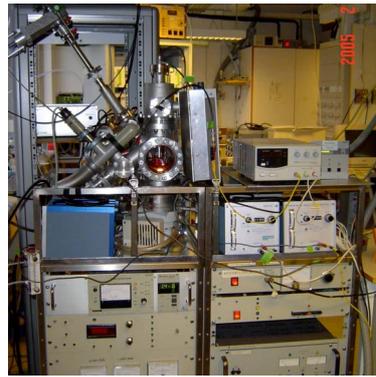
- Monitoring network (Haga, Järntorget, Mölndal)
- Femman (Urban 1)
- Campus (Urban 2)
- Läppstiftet (Urban 3)
- Olskroken (Urban 4)
- Stadshuset (Urban 5)
- Råö (Rural)
- Meteorological sites
- Aeroplane



# GÖTE-2005

- Measurements between 2/2 and 2/3, in the Göteborg area.
- February, a typical winter month with expected high levels of air pollutants?- Probably not 2005...
- [www.che.gu.se/atmsci/Gote\\_2005.htm](http://www.che.gu.se/atmsci/Gote_2005.htm)

# GÖTE-2005



## Deltagare:



GÖTEBORGS  
UNIVERSITET



Göteborgs Stad  
Miljö



IVL

SMHI

VASAKRONAN



CHALMERS



Centre for  
Ecology & Hydrology  
NATURAL ENVIRONMENT RESEARCH COUNCIL

**ETH**  
Eidgenössische Technische Hochschule Zürich  
Swiss Federal Institute of Technology Zurich



Meteorologisk  
institut  
marked.met.no



ACCENT  
ATMOSPHERIC COMPOSITION CHANGE  
THE EUROPEAN NETWORK OF EXCELLENCE

**u<sup>b</sup>**  
UNIVERSITÄT  
BERN

PAUL SCHERRER INSTITUT  
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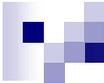


Independent Administrative Institution  
National Institute for Environmental Studies



# Examples on measurements

- VOCs, Daily samples and PTR-MS
- NO<sub>x</sub>, O<sub>3</sub>, SO<sub>2</sub>, CO
- UV-spectra
- Mercury
- Aerosols
  - SMPS
  - Organic speciation
  - Elemental composition
  - OC/EC
  - C14
  - MOUDI-impactor
  - PBMS
  - LIDAR
  - AMS-Flux



## What will happen in the future?

- Data evaluation
- Database
- Model verification
- Conference, 2nd November



# Contribution to NORPAC

- Establish emission factors for Nordic conditions
- Aerosol dynamics during GÖTE-2005
- Intercalibration of DMPS/SMPS
- Organic speciation of aerosol particles

