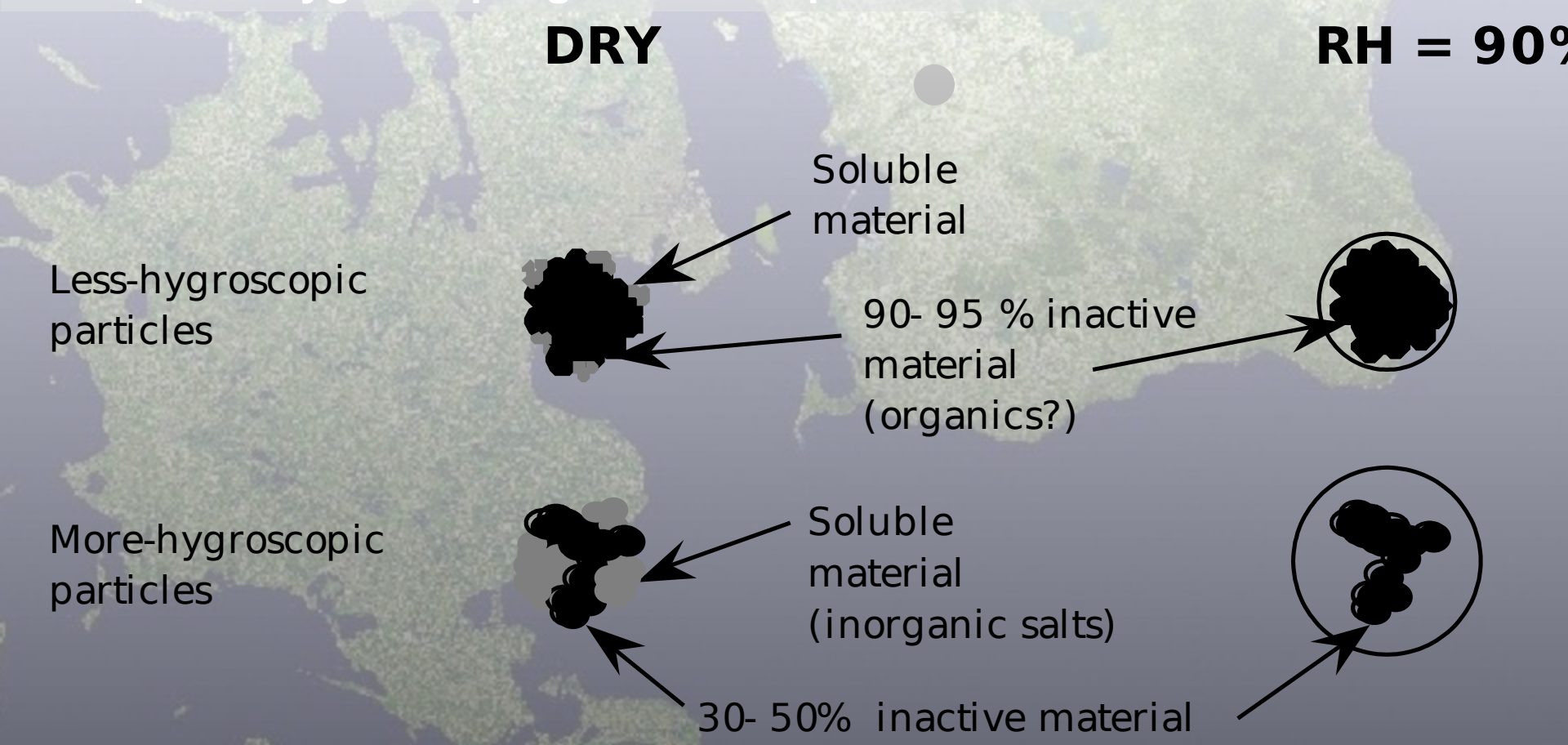


Birgitta Svenningsson
Lund University
Copenhagen University

Field experiments (Italy, Germany, England)
H-TDMA (hygroscopicity)
+ DMPS (particle size distributions)

Results:

- external mixing
- its influence on cloud droplet nucleation
- extrapolate hygroscopic growth to supersaturation



Cloud droplet nucleation of organic aerosols

Vapour pressure measurements

SDS:

Surface tension of water

Surface tension data + partitioning

Surface tension data no partitioning

Critical Supersaturation (%)

1.5

1

0.5

0

20

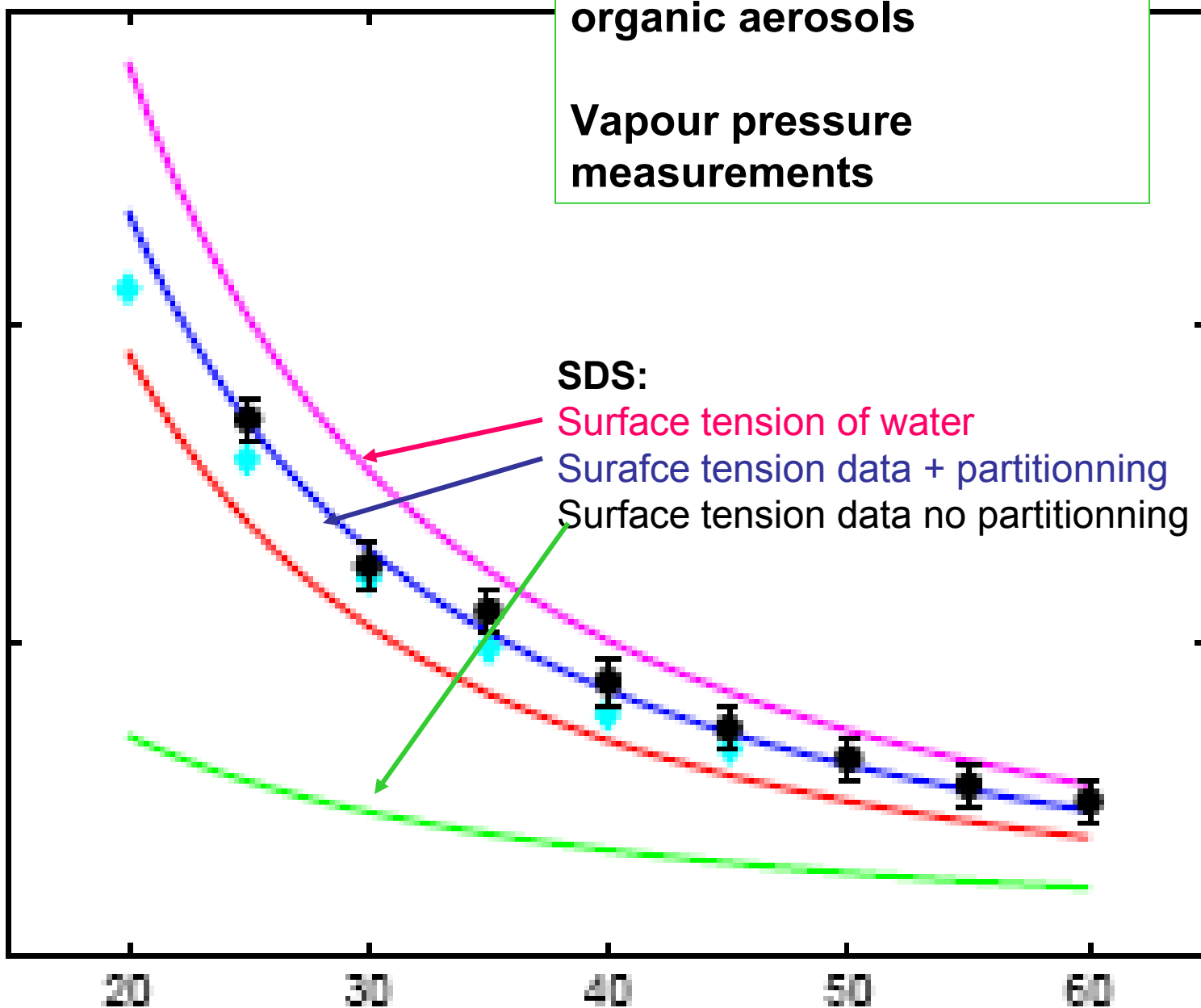
30

40

50

60

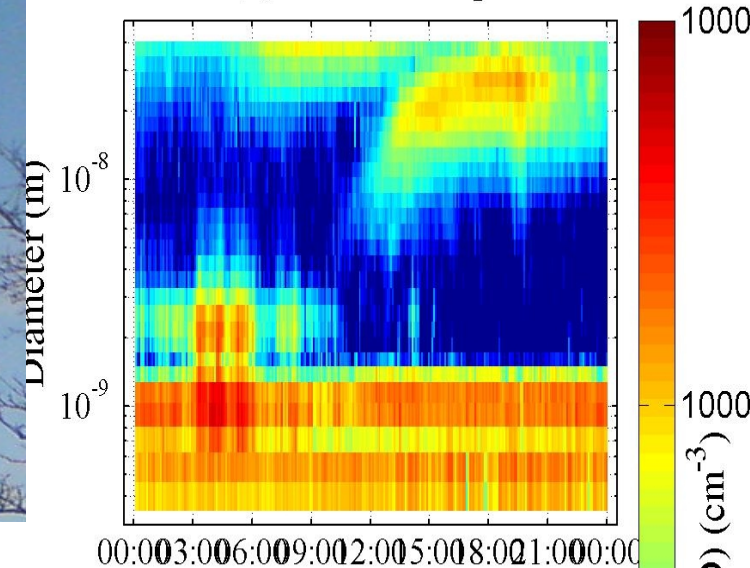
Dry radius (nm)



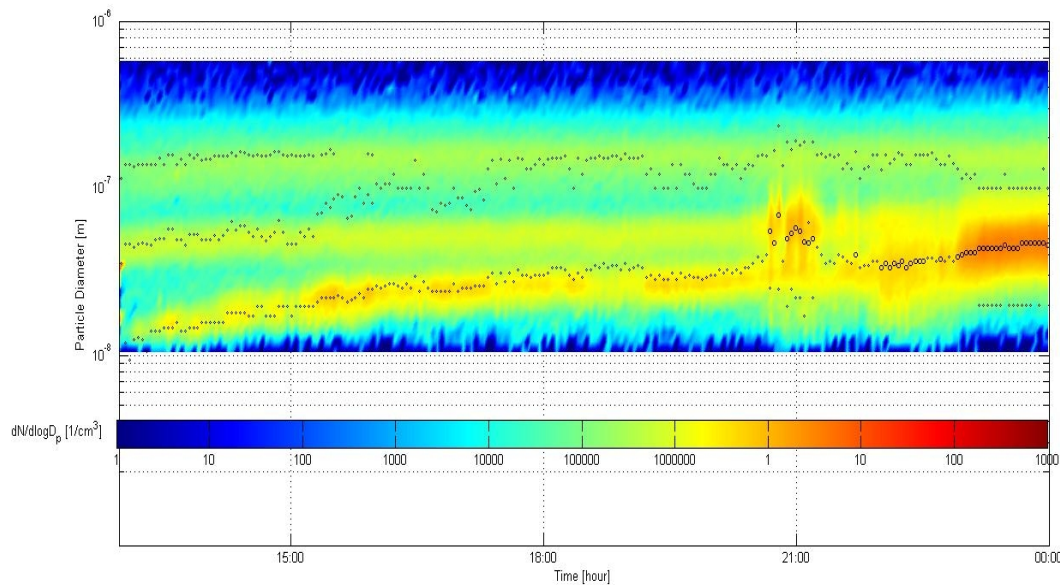
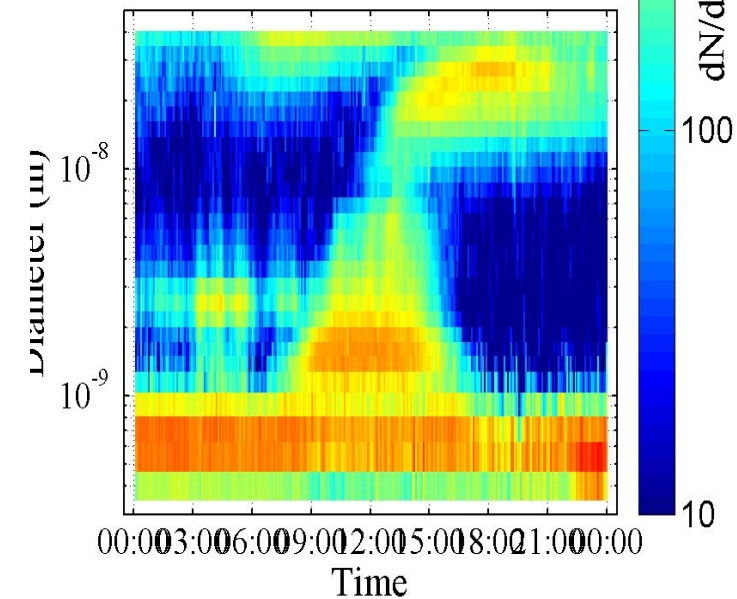
Particle formation studies in northern Sweden (2000 km north of Lund)



AIS5 (+) Abisko 01-Apr-2006



AIS5 (-) Abisko 01-Apr-2006



Interests for the future

- Physical properties related to cloud droplet formation**
 - Surface tension**
 - Parameterisations on individual particle basis**
 - Formation and ageing**