

European Network on New Sensing Technologies for Air Pollution
Control and Environmental Sustainability - *EuNetAir*
COST Action TD1105

INTERNATIONAL WG1-WG4 MEETING on

New Sensing Technologies and Methods for Air-Pollution Monitoring

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POSTER SESSION

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**HIGH RESOLUTION MAPPING OF ULTRAFINE PARTICLES
IN ZURICH BASED ON A MOBILE SENSOR NETWORK**

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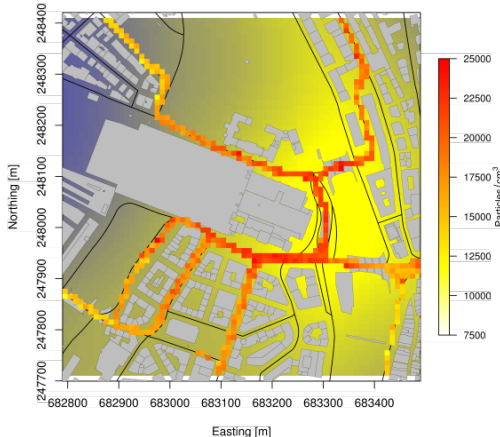
Scientific Context and Objectives

- Epidemiological evidence between ultrafine particles (UFP) concentrations and adversary health effects has not been established yet.
- Wireless networks consisting of small and inexpensive sensors have become viable.
- High resolution UFP concentration maps
 - Expectations:
 - improved knowledge about pollutant concentrations on urban scale
 - substantially enhanced data basis for epidemiological studies

Methodology

**Data from a mobile
sensor network**

Geographic information



Statistical models

**High resolution UFP
concentration maps**

CONCLUSIONS and Future Activities

- Differences in UFP concentration within the city are detectable.
 - Limits are imposed by the variation of the measurements and operation characteristics of the mobile network.
 - Statistical modelling approach seems promising.
 - Techniques for statistical modelling have to be optimized and limits for the minimum temporal and spatial resolution of mapping have to be further investigated.
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