



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

WGs and MC Meeting at Rome, 4-6 December 2012

Action Start date: 01/07/2012 - Action End date: 30/06/2016

Year: 2012-2013 (*Starting Action*)



LINKÖPINGS UNIVERSITET

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WG1 Participant (post doc in the research group of
prof. Anita Lloyd Spetz, Action Vice-Chair)

Linköping University, IFM / Sweden

Background

- 2005: Degree in Physics, University of Catania
 - *Thesis on Elemental characterization of archaeological volcanic glasses using XRF.*
- 2009: PhD in Physics, University of Catania
 - *Final dissertation on Silicon Carbide Nuclear Detectors.*
- 2009–2012: three-year postdoc at Politecnico di Milano, Como Campus
 - *“Compton Architectures at high efficiency and low noise based on innovative techniques for the detection of X and gamma rays from space”, funded by the Italian Space Agency.*
- Since October 15th, 2012: postdoc at Linköping University, IFM

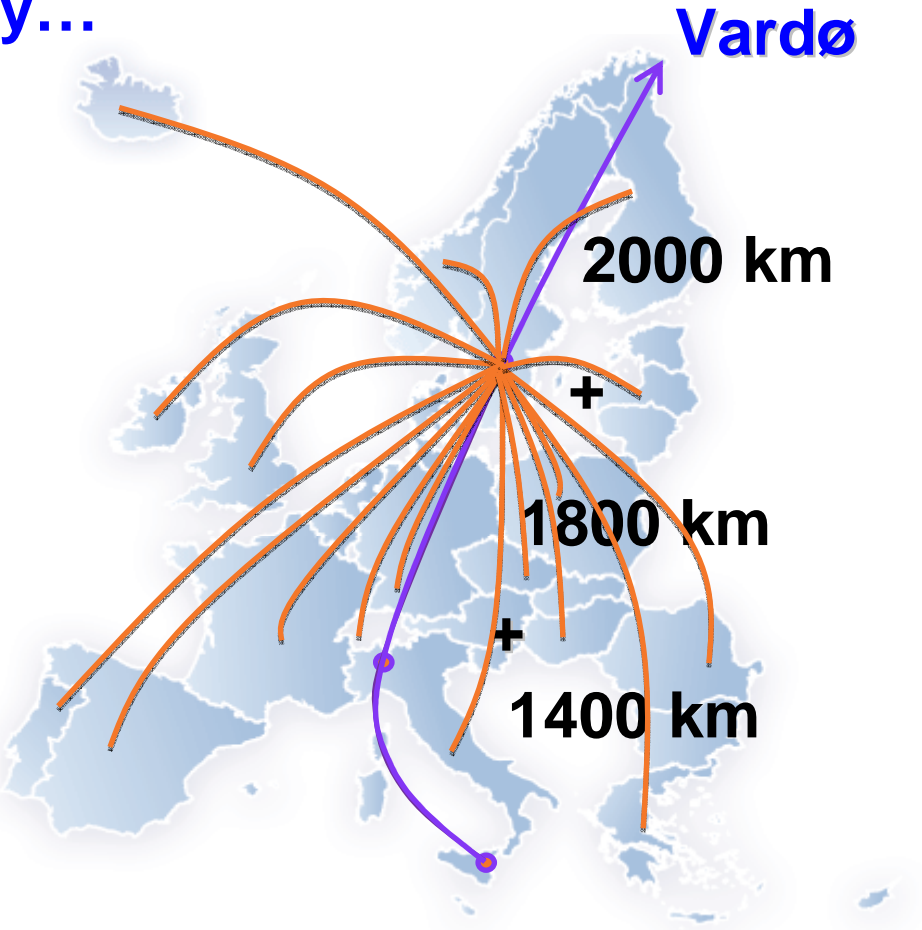




Scientific context and objectives in the Action

According to the trajectory...

...or some COST country





Research activities

- **Scientific background:**
 - Electrical characterization of wide band gap semiconductor detectors (SiC, CdTe)
 - Study of spectroscopic performance of semiconductor radiation detectors at RT and under unstable thermal conditions
 - Electronic noise measurements of ultra low noise preamplifiers (integrated CMOS technology)
 - Characterization of detector/front-end systems
- **In the Action:**
 - SiC/graphene sensors
 - Graphene FET design and development
 - Sensor processing and measurements
 - Photolithography and deposition techniques

Research Facilities

- Gas mixing systems, 8 gas regulators, software for control and data collection
- Electronics and software for operation of gas sensors based on FET devices or resistive type sensors from RT to +800°C
- Environmental mass spectrometer
- Environmental Kelvin probe
- Environmental SPM
- Sputtering system with 3 simultaneous targets
- Evaporation system
- Bonding machine
- Surface welding machine
- Scriber

