Generalitat de Catalunya
Departament de Territori
i Sostenibilitat

SMC in the LIAISE campaign: Equipment and modeling

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Workshop LIAISE, 9th march 2021

1-Equipment

WindRASS = SODAR + RASS

SODAR = **SO**nic **D**etection **A**nd **R**anging ~ Wind Profiler

RASS = **R**adio **A**coustic **S**ounding **S**ystem ~ Temperature Profiler

1-Equipment

Characteristics:

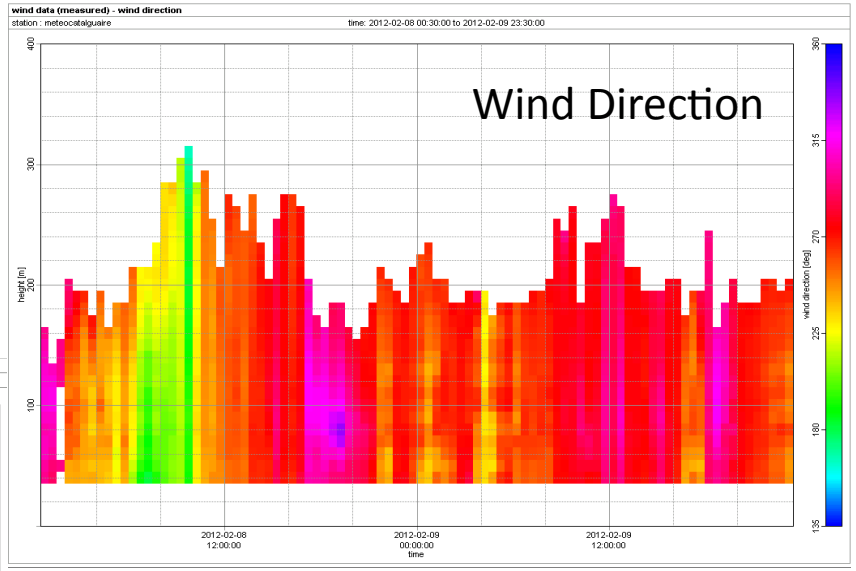
- Vertical resolution: **40-360 m** each **10 m**
- Temporal resolution: **10'**

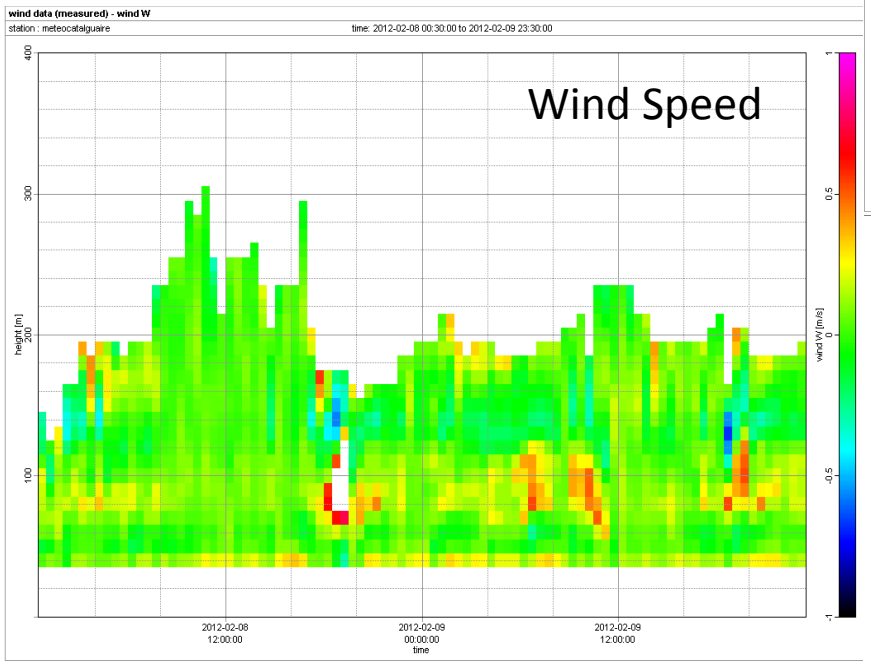
Main variables:

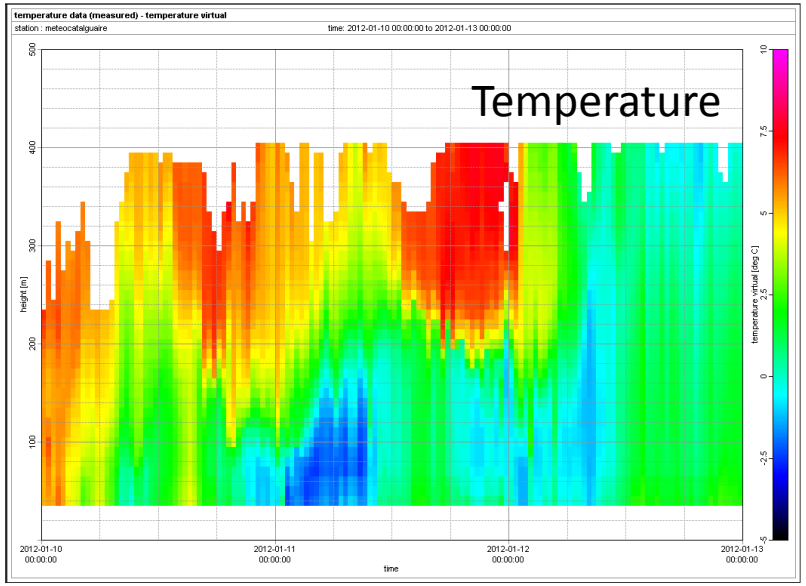
- Wind: **u, v, w**
- Temperature: **T**

Derived variables:

- SigW, Turbulence, ...







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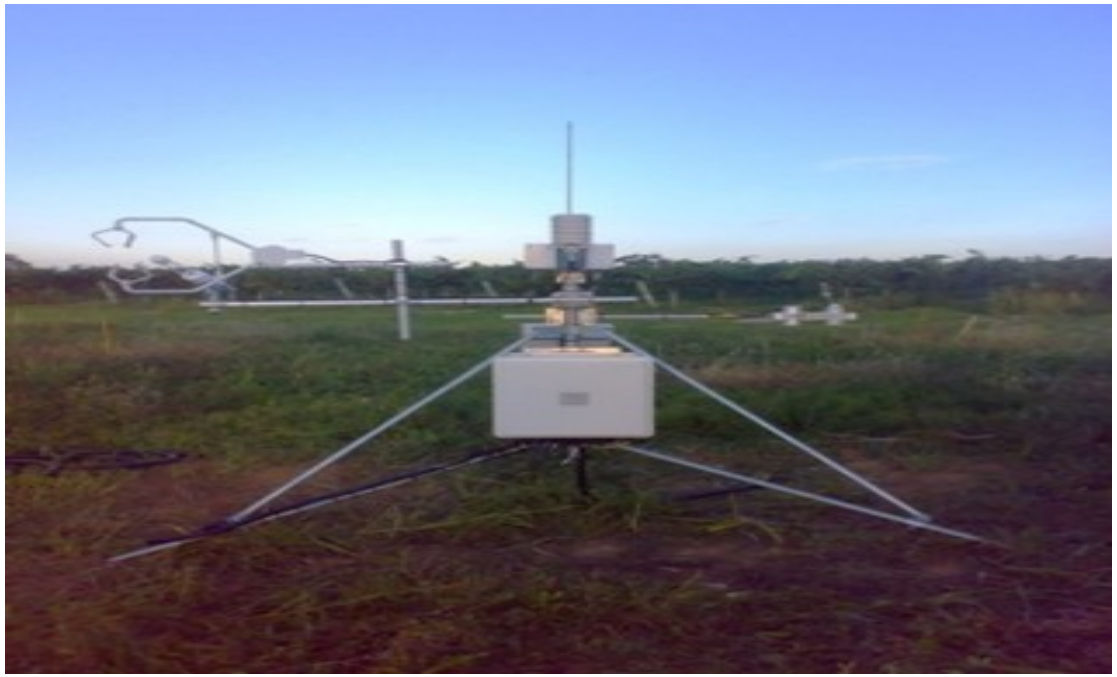
1-Equipment

SEB



Variables: Temperature, Relative humidity, 3D wind, CO2 flux, heat fluxes, radiation, ground sensors ,….
High frequency measurements

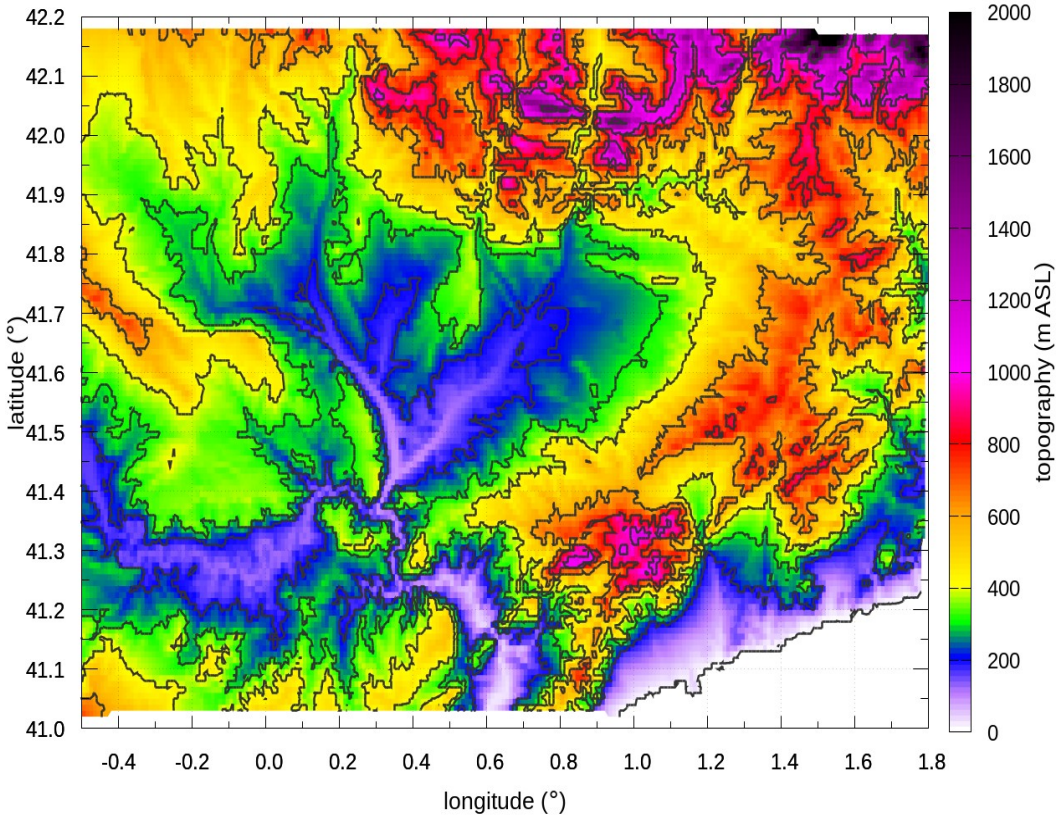
AWS

Variables: Temperature, Relative humidity, wind, pressure, precipitation.

Possibility of take data every 1 min.

2- Modelling

Modelling WRF at high resolution



- Working actively in the model intercomparison group.
- Sensibility studies with WRF running at resolution of 1.5 km changing parametrization options.
- Check the reliability of the model at very high resolution ~400m.
- Post-LIAISE: data assimilation with STMAS.

THANK YOU !!!