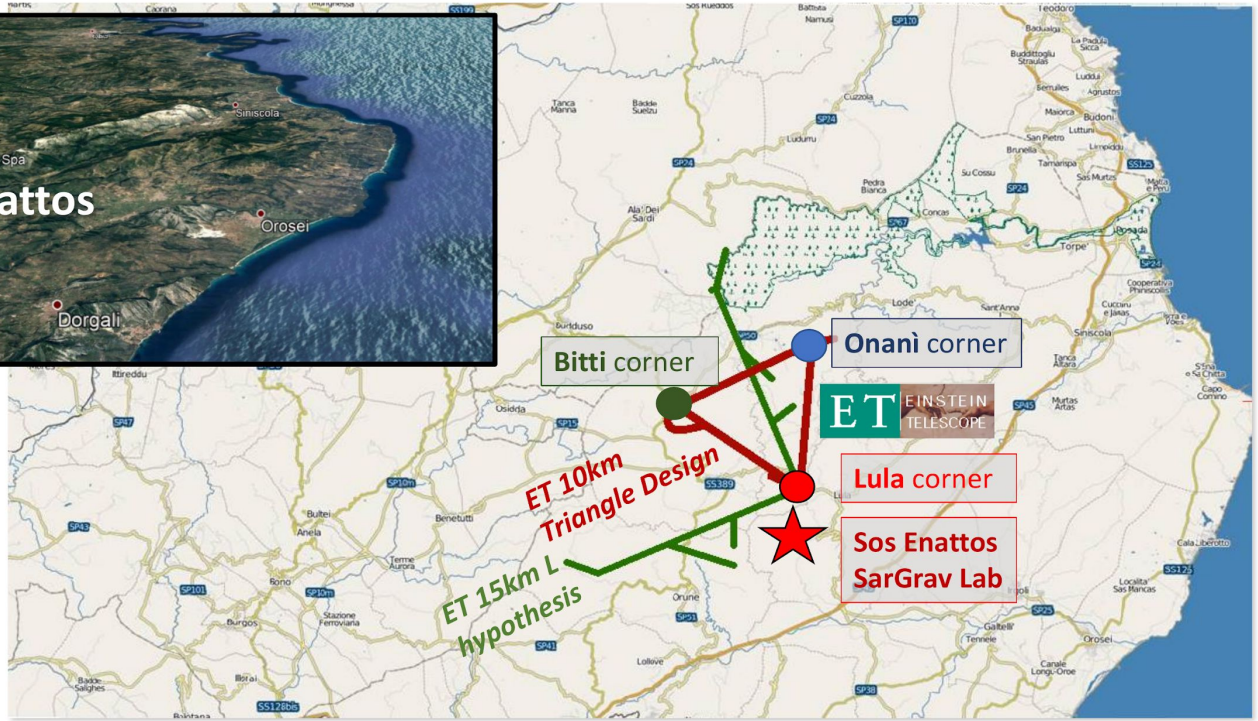
Seismometer array installation at Sos Enattos

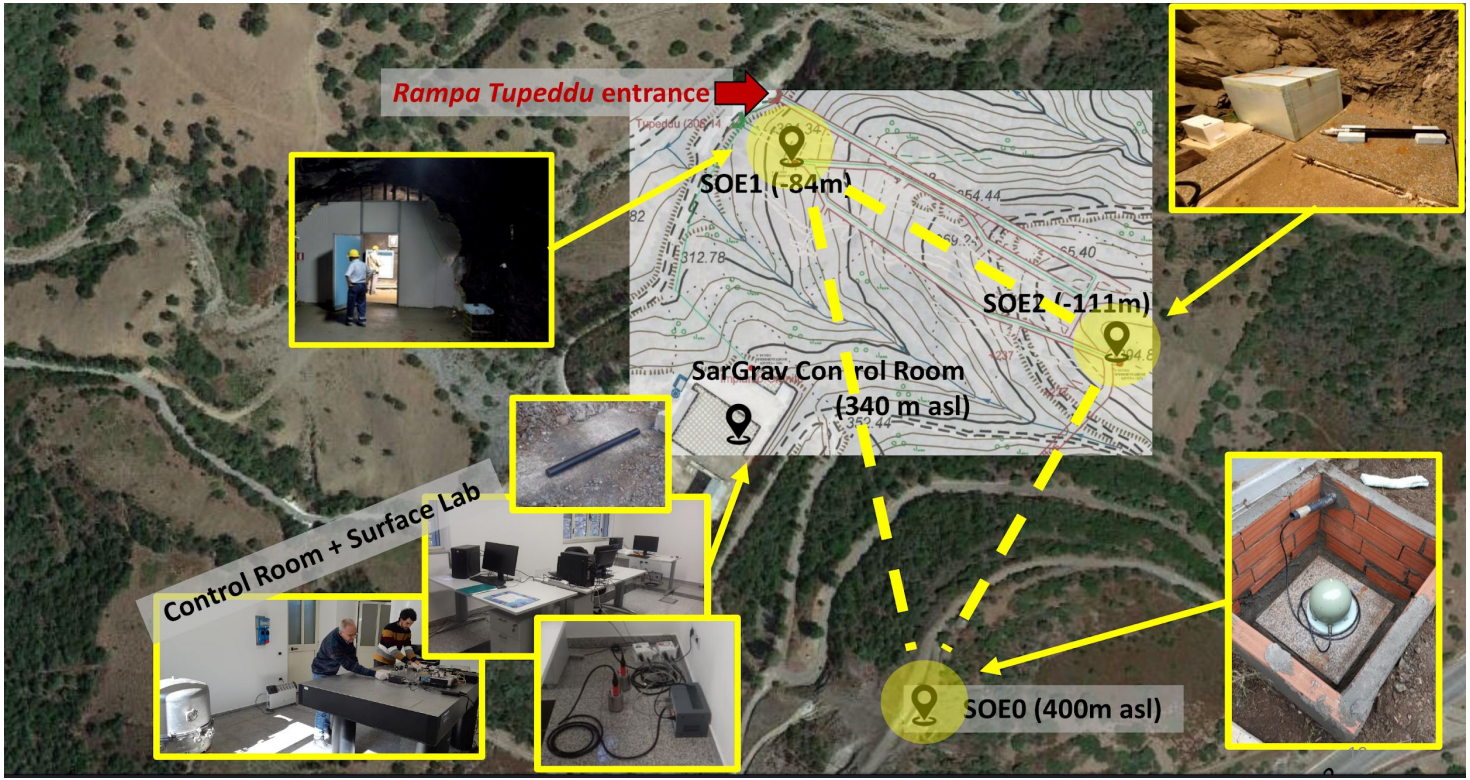
A. Contu, A. Cardini ....

Seismometer array installations at the three corners



Installations carried out by INGV Pisa/Rome at the three corners with help from INFN, UniSS and IGEA

Sos Enattos site



Measurement stations at the Sos Enattos site:

- **SarGrav surface Lab** + **Control Room**;
- **SOE0** (surface);
- **SOE1**, **SOE2**, **SOE3** (86m, 111m, 160m underground).

Sensors currently installed:

- 4 broadband triaxial seismometers (Nanometrics Trillium 240 and 120horizon);
- 2 magnetometers (MF6-06);
- 3 short-period triaxial seismometers (Nanometrics Trillium 20PH, *first seed of a surface array*);
- High Precision Tiltmeter (part of the *Archimedes* experiment @ SarGrav → talk by L. Errico)
- Weather station (@ SarGrav Lab).

Work in progress: new sensors (seismometers and geophones, magnetometers, microphones) will be added to the network in the next months

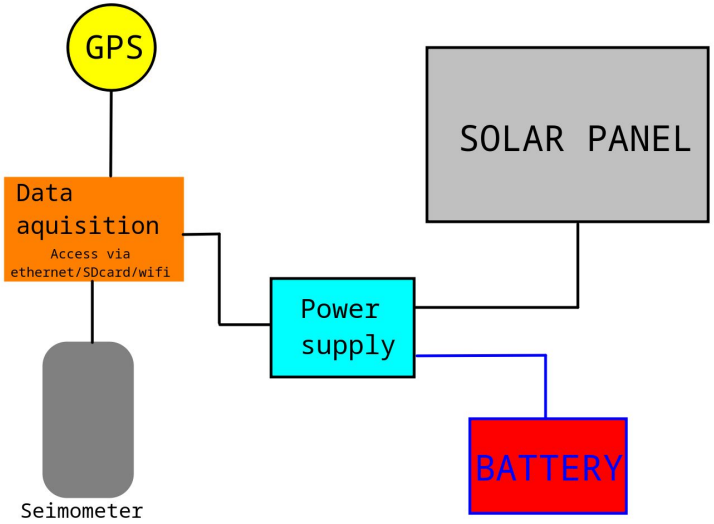
Install 15 seismometer array

The planned array map was different but once there the INGV people realised that the hill was steeper than anticipated and the position of several seismometers was changed.

*It is better not to install seismometers around a peak to avoid detecting bouncing waves within the peak in all of them

Preparations

Setup


GPS
SOLAR PANEL
Data
aquisition
Access via
ethernet/SDcard/wifi
Power
supply
BATTERY
Seimometer

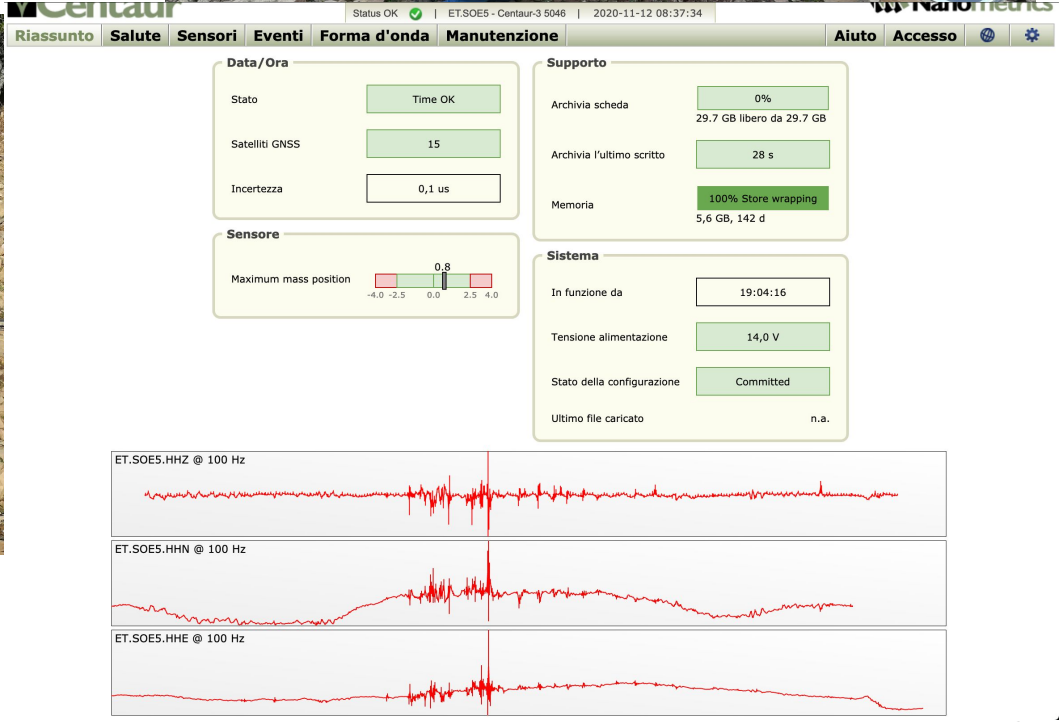

latte sano

Installation

1. Dig ~50x30cm hole
2. Put some sand at the bottom and push it to make a floor for the seismometer
3. Insert seismometer carefully keeping it at level and aligning it with a compass
4. Fill the hole slowly with sand and cover it with stones
5. Secure panel and box against wind and rain

* for long term installations concrete floor is used instead of sand

Check that everything works



Conclusions

- Everything went very smoothly
- Fruitful collaboration with other research institutes
- We learned how to install and operate compact seismometers
- Wait for data to be analysed…
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