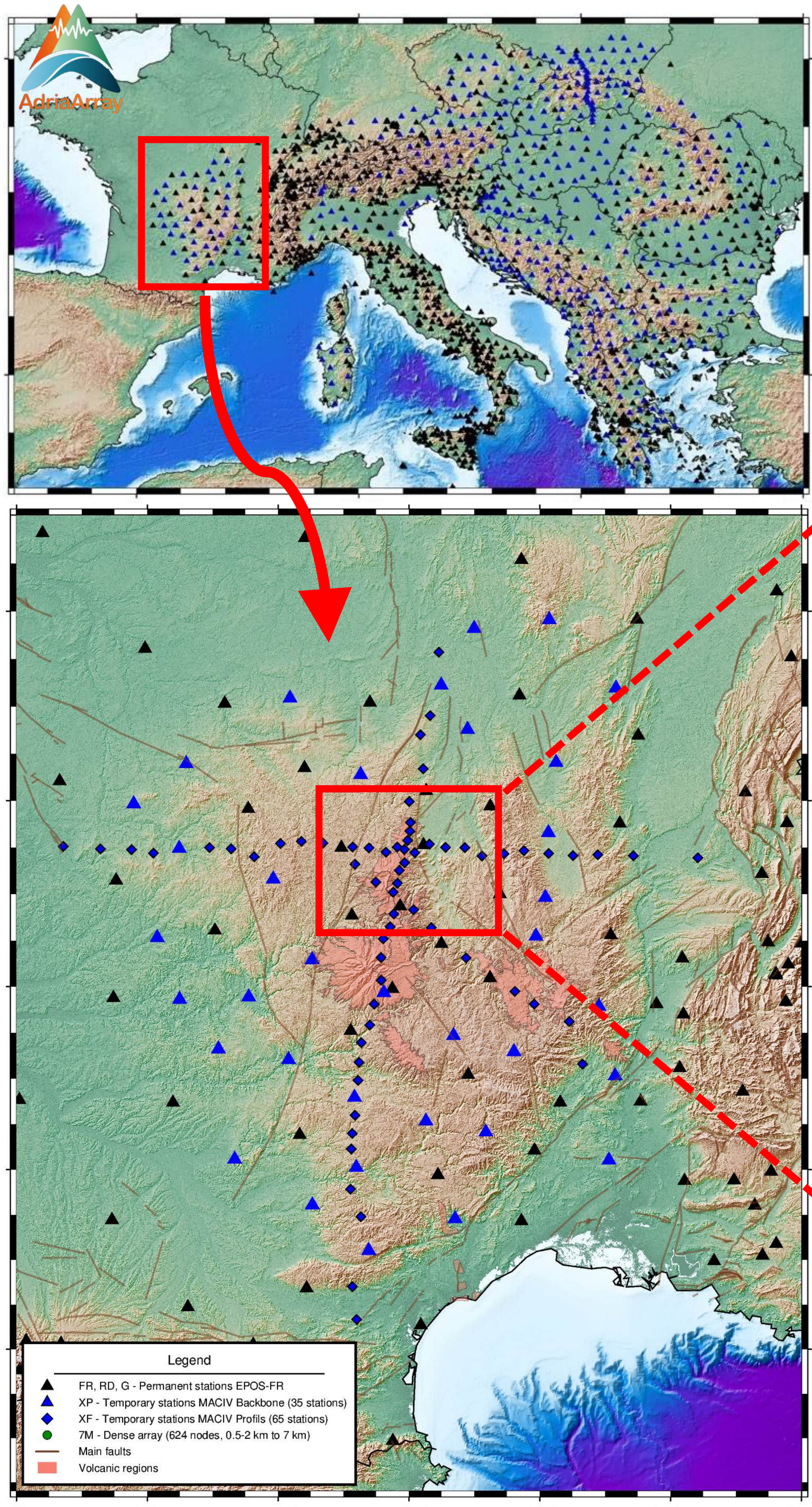


using multiscale seismic experiments: the MACIV project

Coralie Aubert, Guilhem Scheiblin, Sébastien Chevrot, Nicolas Cluzel, Aurélien Mordret, Hélène Pauchet, Anne Paul, Sandrine Roussel, Nikolai Shapiro, Thierry Souriot, Matthieu Sylvander and the MACIV-NODES Team*

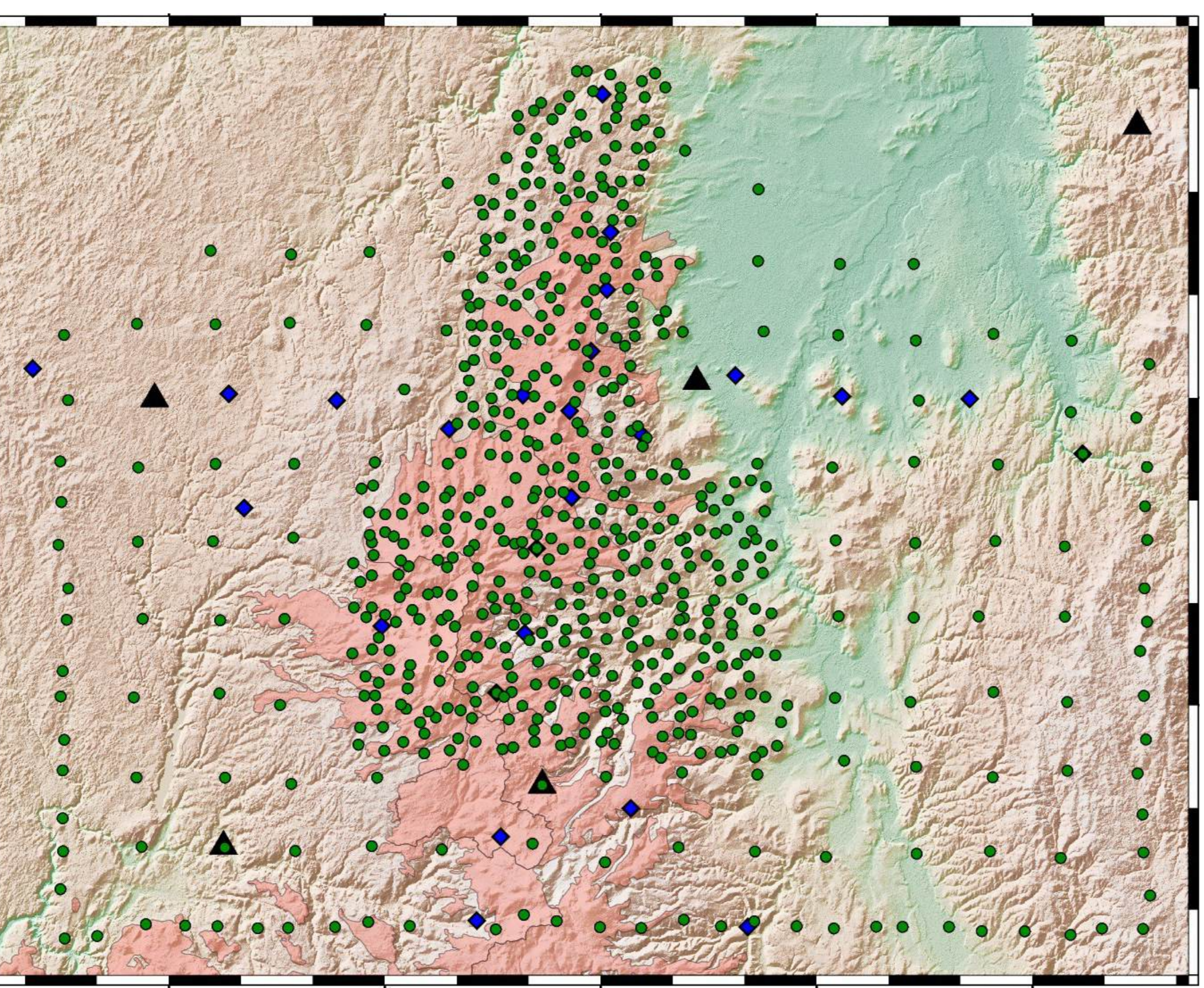


The MACIV experiments in numbers

French contribution to the European AdriaArray project



- 4 laboratories in France**
- ISTERre (Grenoble)
 - GET and IRAP (Toulouse)
 - LMV (Clermont-Ferrand)



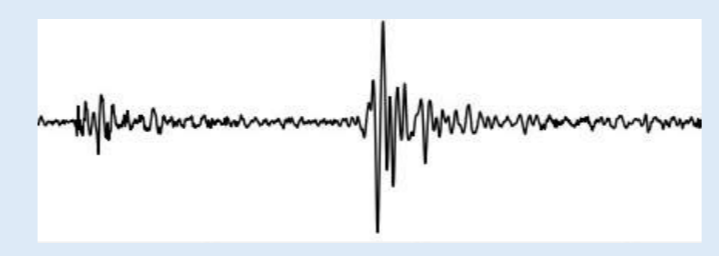
- 724 seismic stations deployed:**
- 35 broadband stations - 3.5 years
 - 65 medium-band stations - 2.5 years
 - 624 nodes – 1 month (GSB/Geospace and 3-component geophones, 5 Hz)



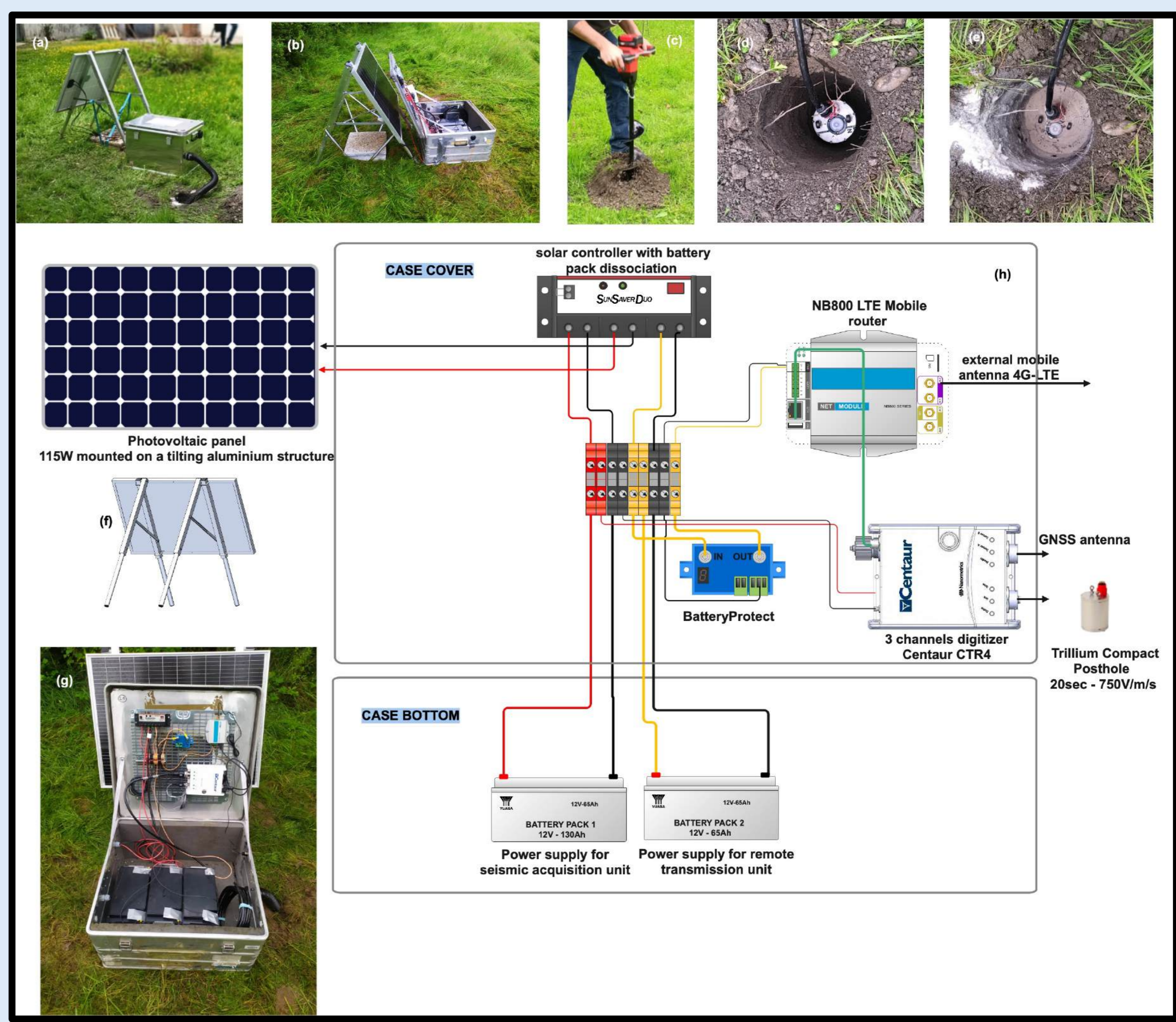
- Multiscale seismic experiments**
- Large scale array complementing French permanent networks
 - 3 quasi-linear profiles crossing major volcanic areas
 - 2 dense arrays covering Chaîne des Puys and Mont-Dore/Sancy (the ultra-dense network following an **aperiodic grid**)

Standardized instrumentation boxes

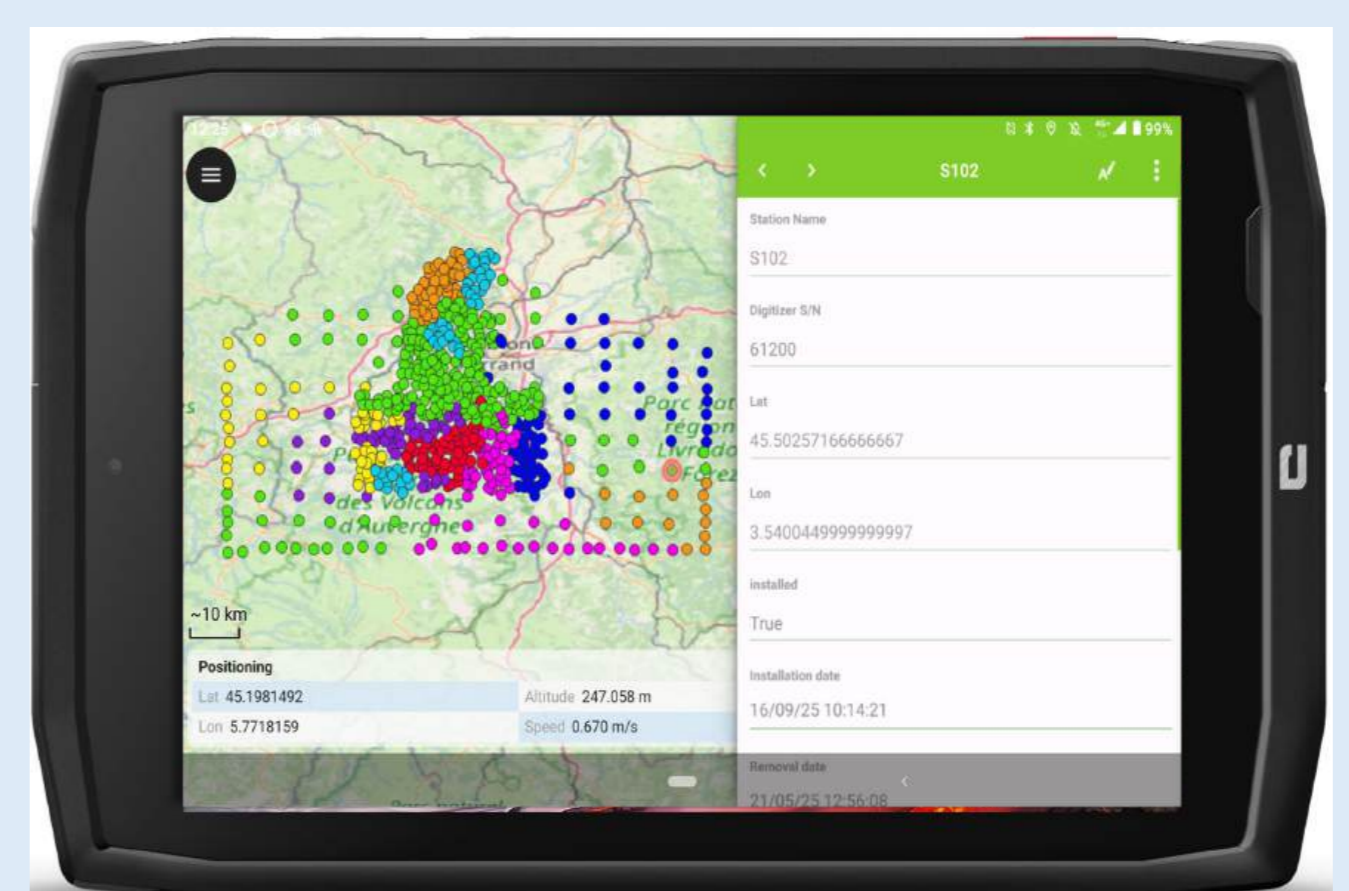
Optimized for cost and performance, with real-time data transmission and distribution, and quasi-real-time state-of-health monitoring and earthquake localization



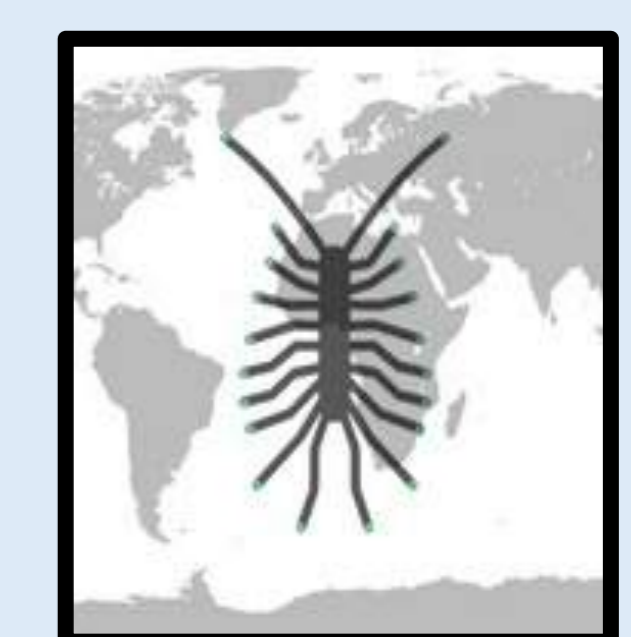
Aubert et al. (2025), [doi:10.4401/ag-9264](https://doi.org/10.4401/ag-9264)



Innovative tools developed for dense array deployment



- QField application:**
- Field mapping
 - Metadata automatic retrieval



RTK rover prototype using Centipede GNSS network : rover receiving NTRIP corrections from the Centipede network to get real-time and centimeter-accurate geolocation.

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