



EPN DENSIFICATION

D2237 - THE ENDGAME FOR IGS14

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EUREF2023 symposium, 23-26 May, 2023
Gothenburg, Sweden



EPND MILESTONES

- D1933, as “pioneer” solution
- D2050, as “intermediate” solution
- D2100, as major achievement
- D2150, as first “stable” solution
 - New webpage
 - Still complete WEEKLY re-combination
- D2200, simple extension of D2150
- **D2237, the last solution expressed in IGS14**



EPND WEBSITE

EPND WEBSITE: <https://epnd.sgo-penc.hu>

- Interactive maps, diagrams - PLEASE PLAY WITH!
- Direct access to the combination results
- Product portal serving more communities
- Clear visibility for contributors, dedicated place to share results
- In view of REPRO3, please **check out the EQUIPMENT plots!**

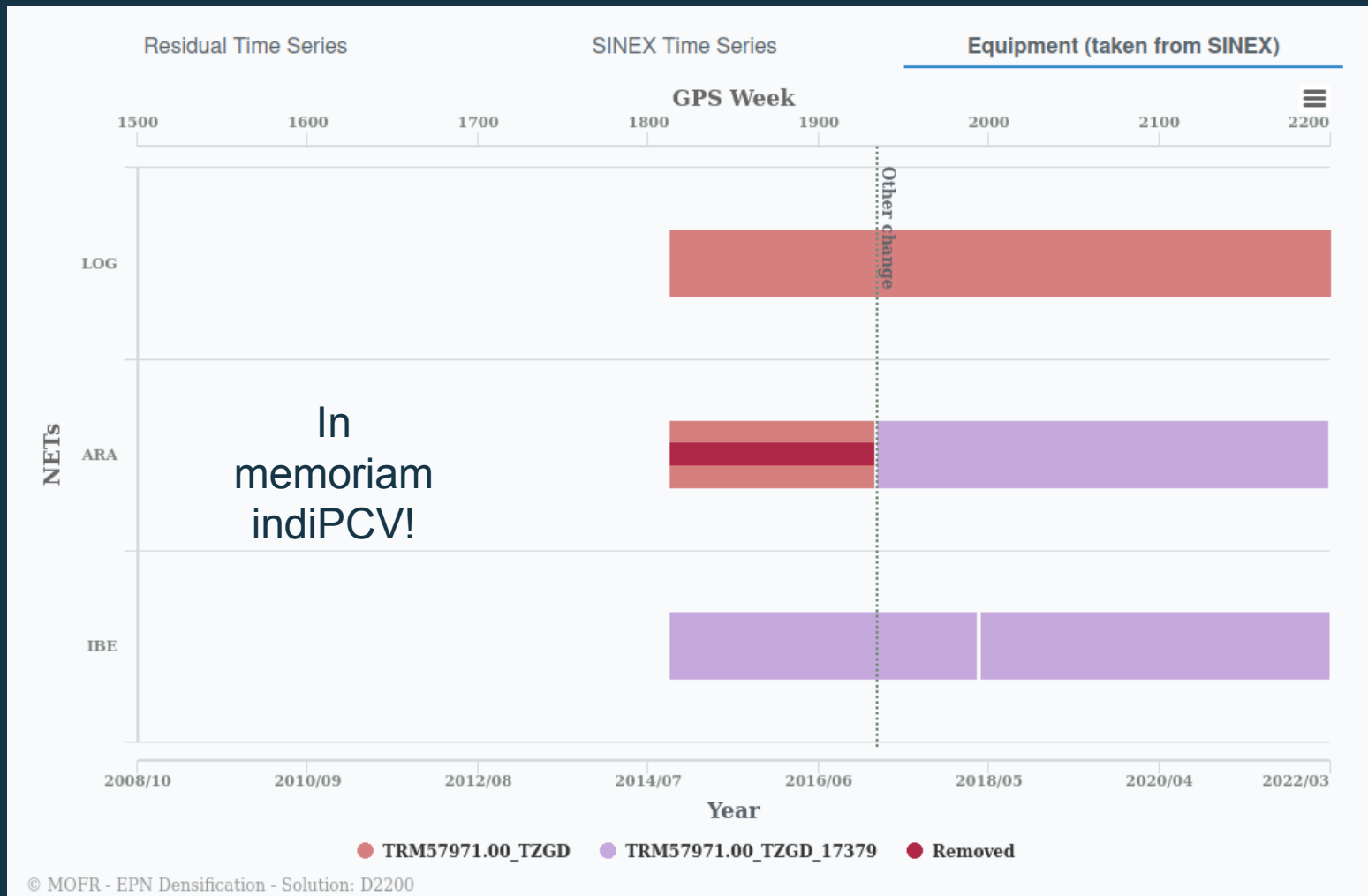


EPND STATION EQUIPMENT





PCV MODEL USED ...





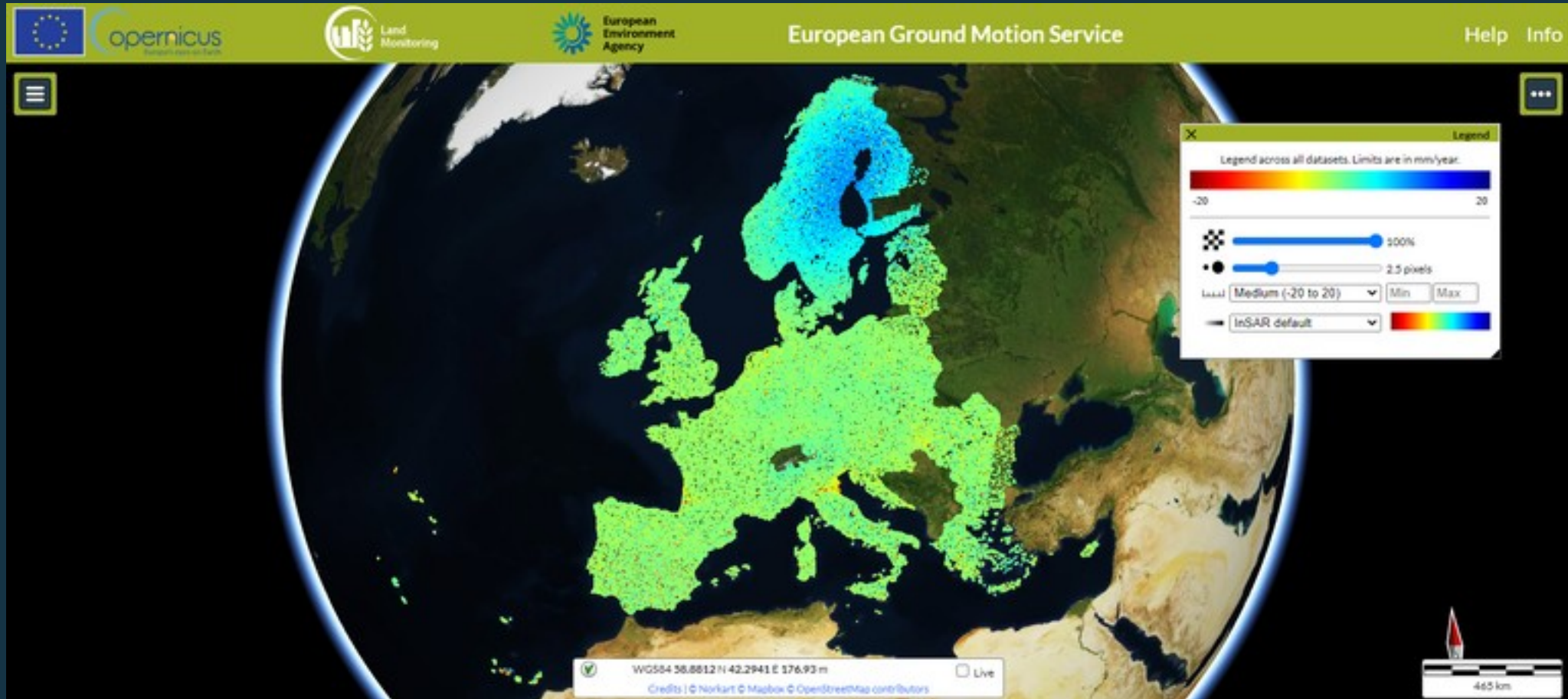
EPND APPLICATIONS

EPND IS A PUBLICLY AVAILABLE PRODUCT, EVERYONE IS FREE TO USE IT

- Implemented by EUREF WG_s
 - EUDV
 - EuVM by LM
- EPOS GNSS Product Portal - EPOS extension is expected
- EGMS - European Ground Motion Service
assisted EPND



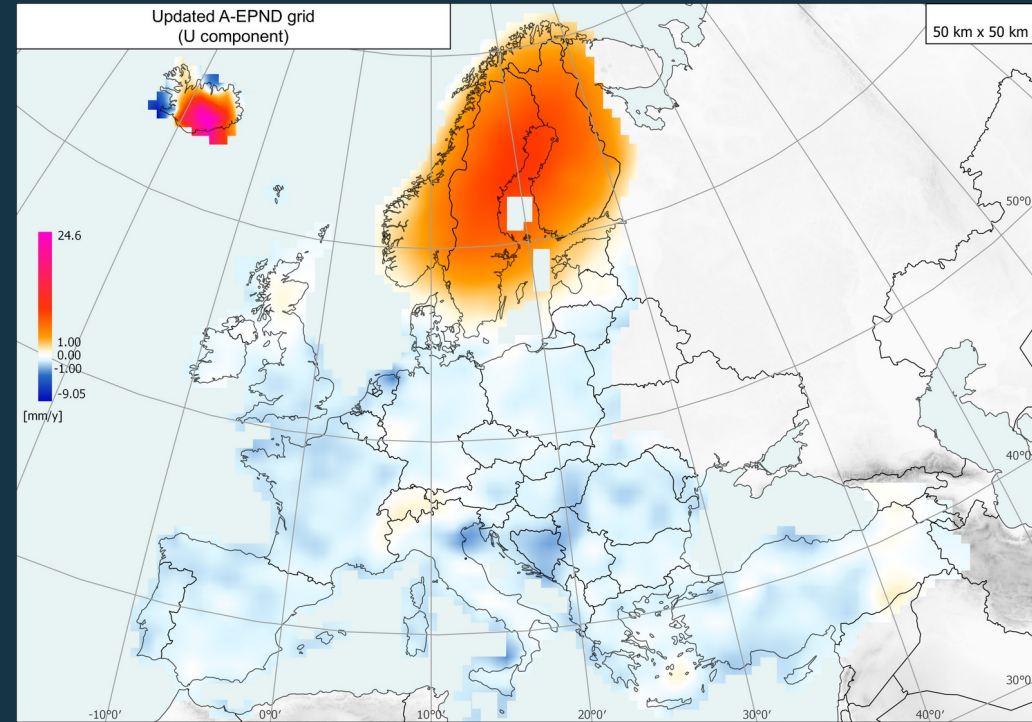
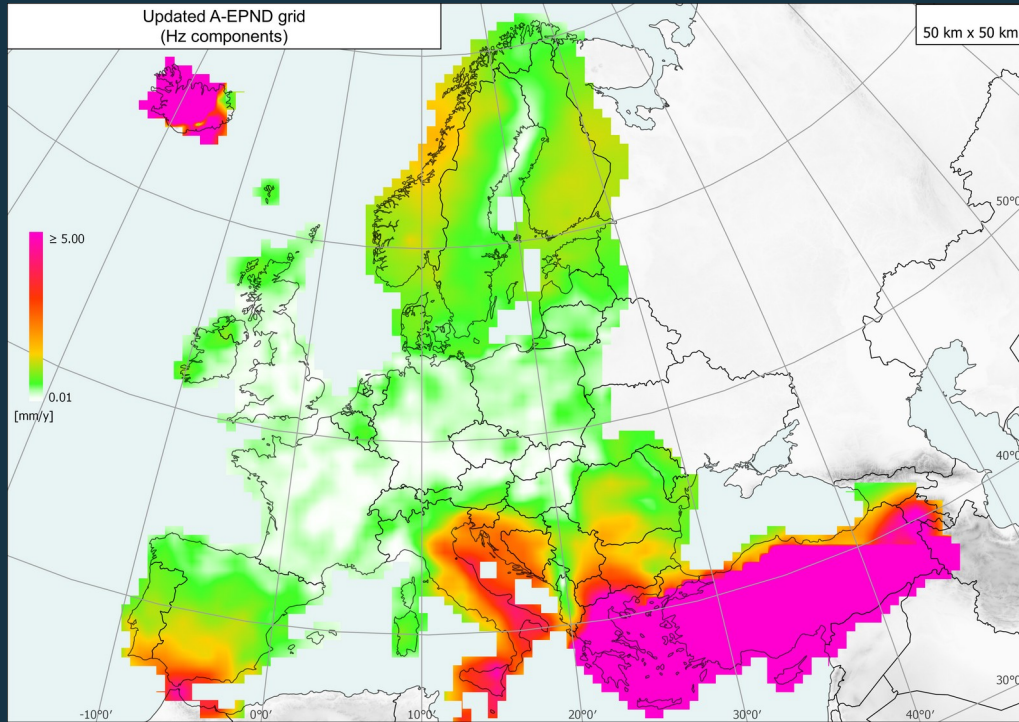
EGMS - A-EPND



<https://land.copernicus.eu/pan-european/european-ground-motion-service>



EGMS - A-EPND





EPND APPLICATIONS

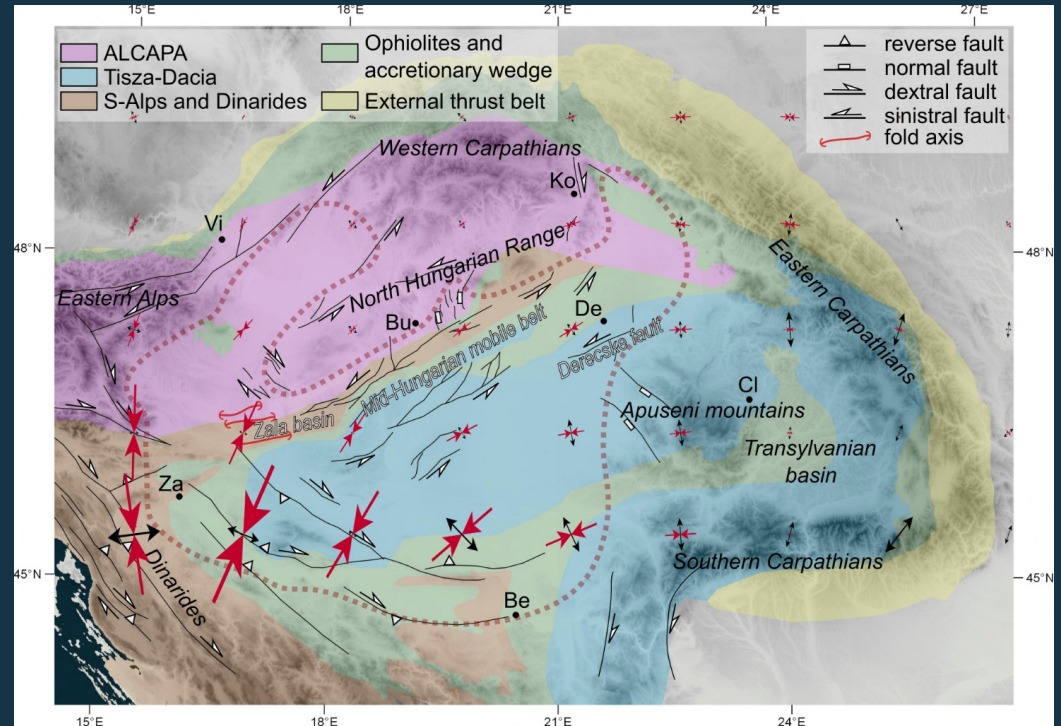
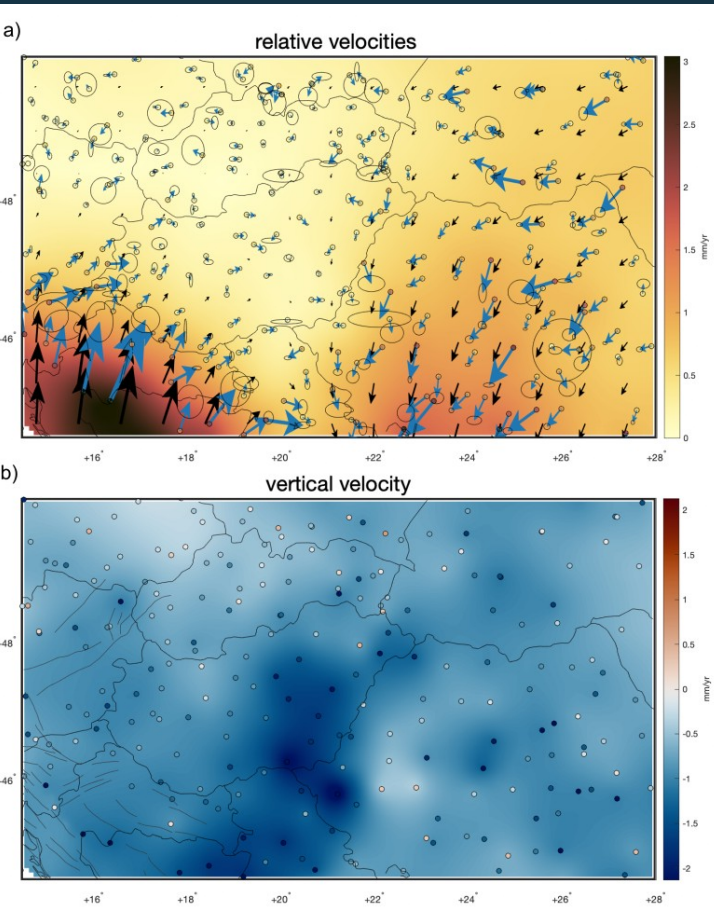
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assisted EPND
- Sub-regional geophysical interpretation



EPND IN GEOPHYSICS

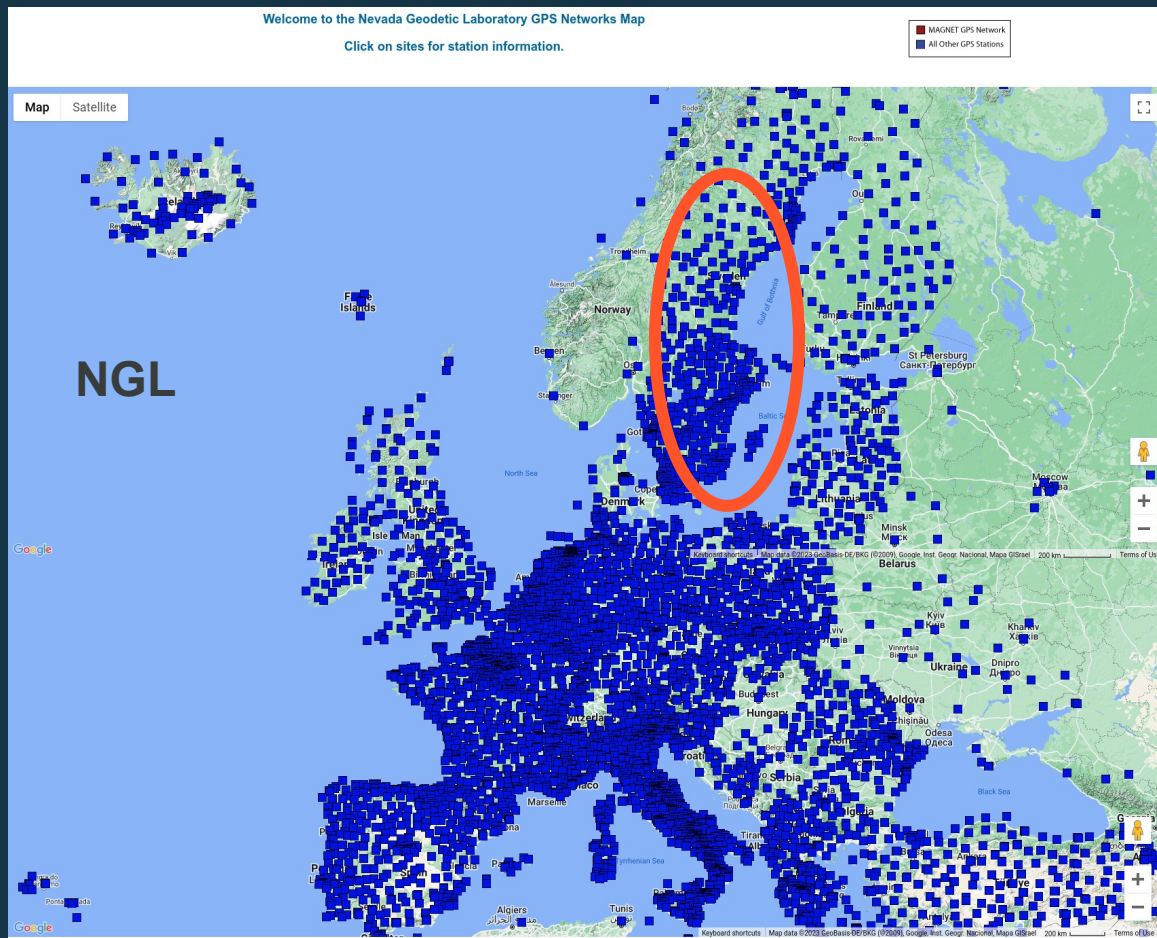
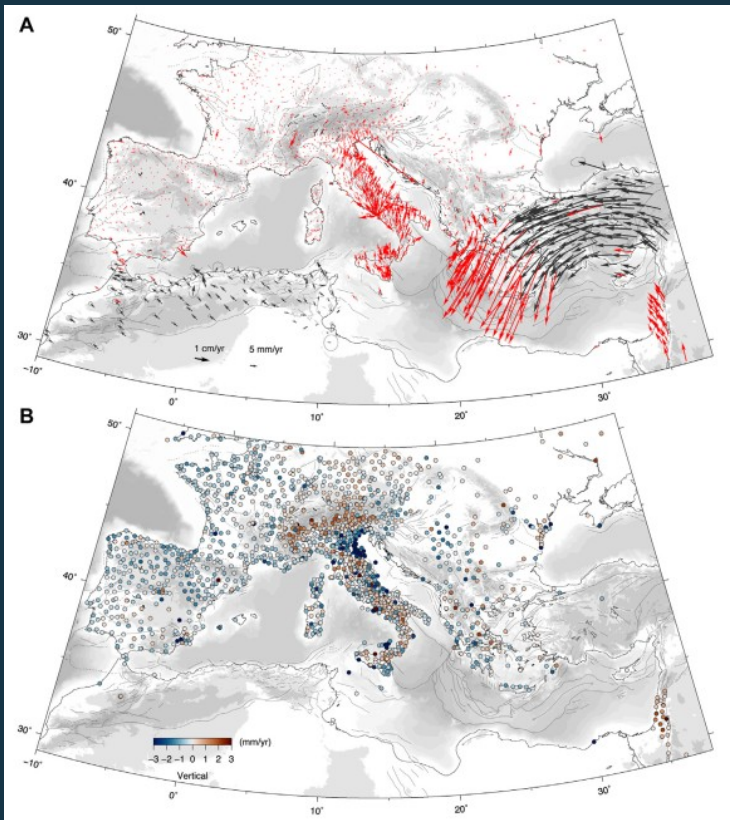
Porkoláb, K., Broerse, T., Kenyeres, A. et al. Active tectonics of the Circum-Pannonian region in the light of updated GNSS network data. *Acta Geod Geophys* (2023). <https://doi.org/10.1007/s40328-023-00409-8>





Large scale processing

Serpelloni et al 2022





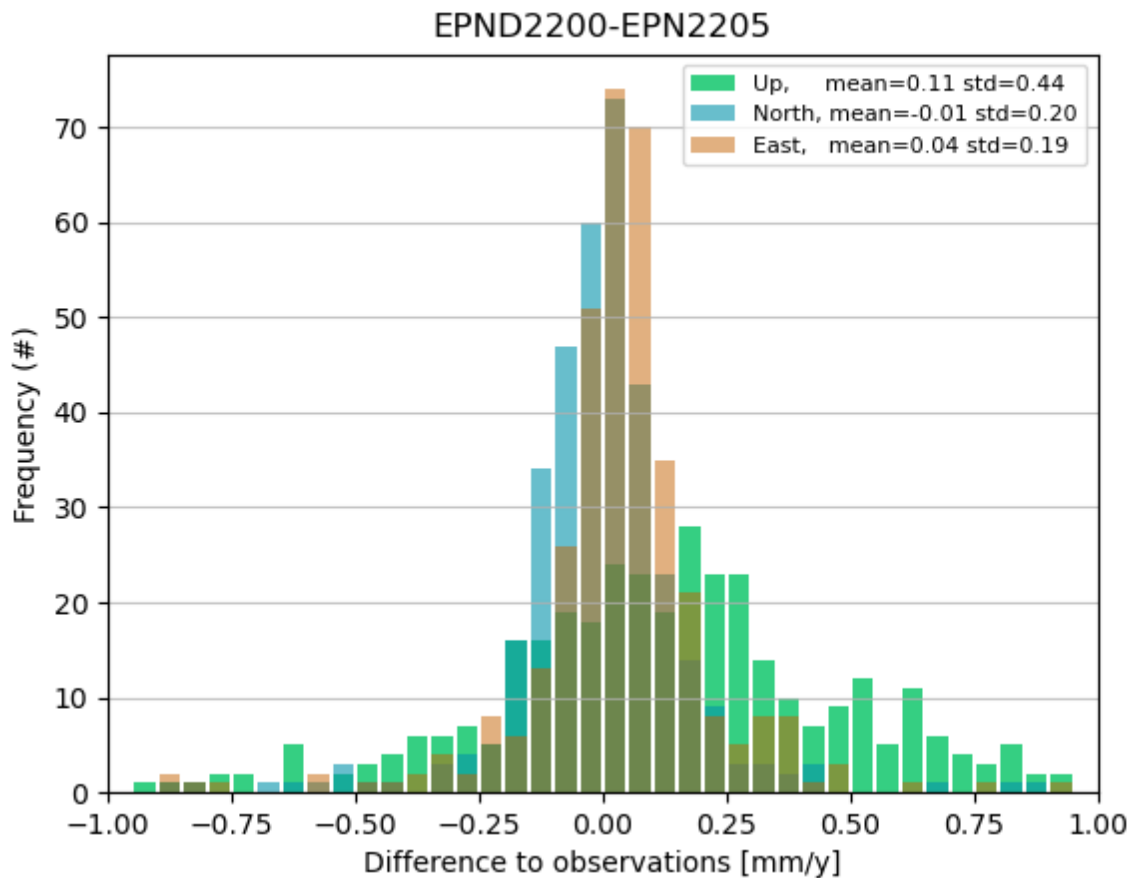
EPND INTERCOMPARISONS

HISTOGRAMS COMPARING TO

- EPN
Provides the reference
- EUDV
collection of ALL European velocity solutions
- NGL - NEVADA GEODETIC LABORATORY
highly automated processing and analysis

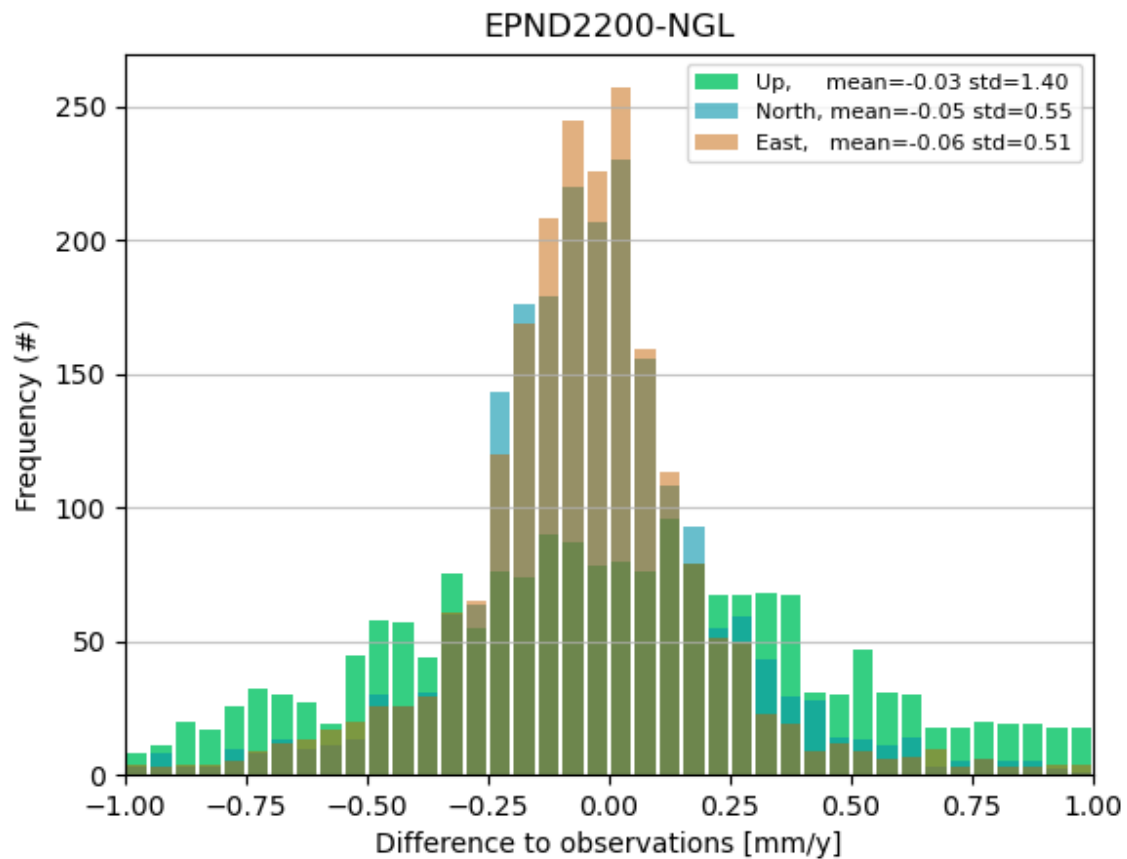


EPND vs EPN velocities



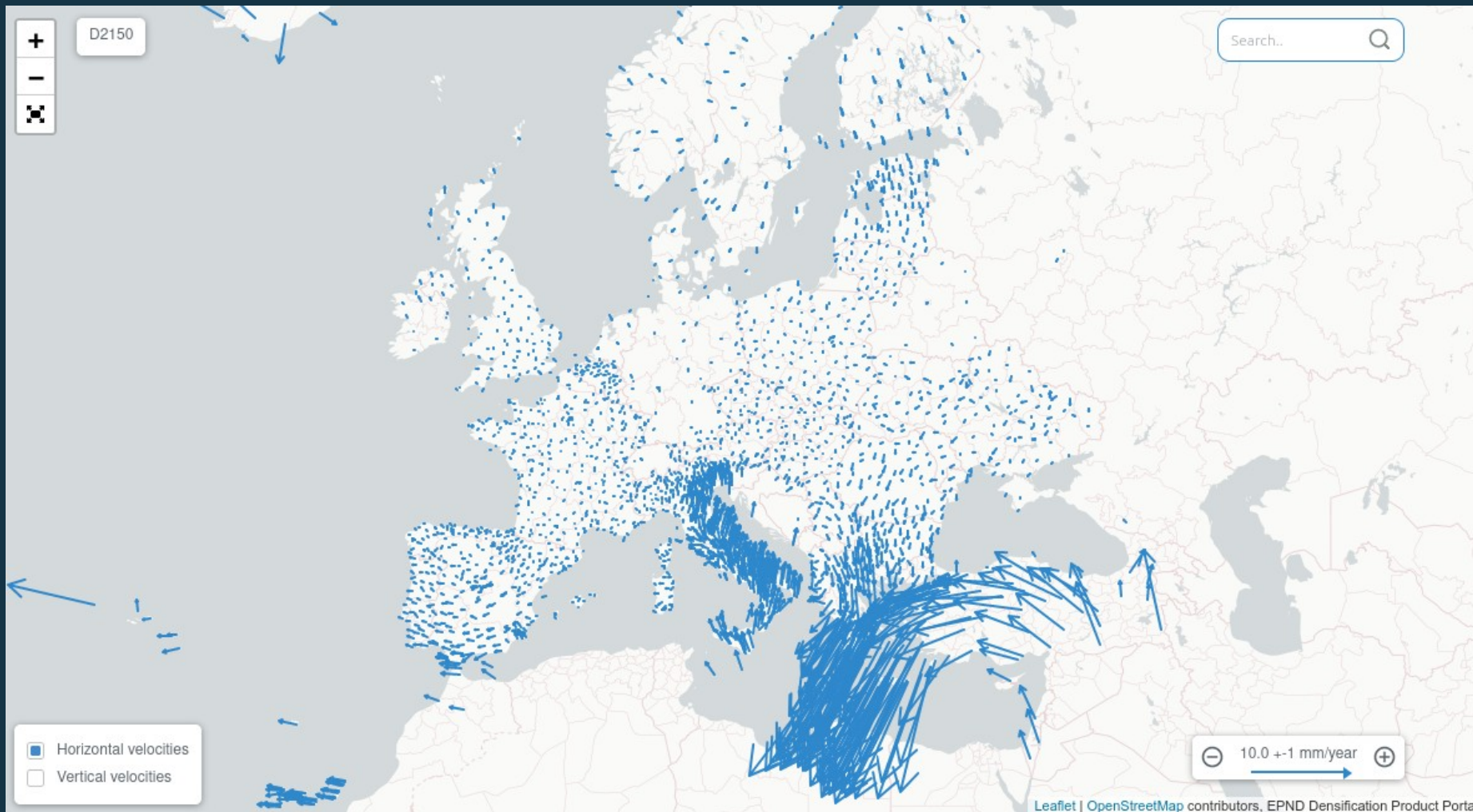


EPND vs NGL





EPND VELOCITIES - D2200





D2237, AS FINAL IGS14 COMBINATION

TWO PHASES:

(1) combining all EPND AC solutions (still some pending)

Ready, and will be available early June

(2) phase (1) +

- with still missing EPND AC solutions;
- 2 EPOS Pan-European AC results;
- **support to ACs in preparing for REPRO3**
- available late Autumn



AFTER D2237 ...

**Long-long SILENCE until a repro3 solution comes out
BUT,**

- repro3 should run in the background, most of the
Densification ACs will participate;**
- in case of processing capacity constraints we are ready to
provide support**
- each AC will be notified about possible issues in order to
finalize the STA/station.info files in agreement with M3G;**



**THANKS TO ALL ACs,
INSTITUTIONS AND INDIVIDUALS
FOR THE LONG TERM SUPPORT OF
EPN DENSIFICATION!**

BE READY FOR REPRO3!



EPN vs EUDV

