

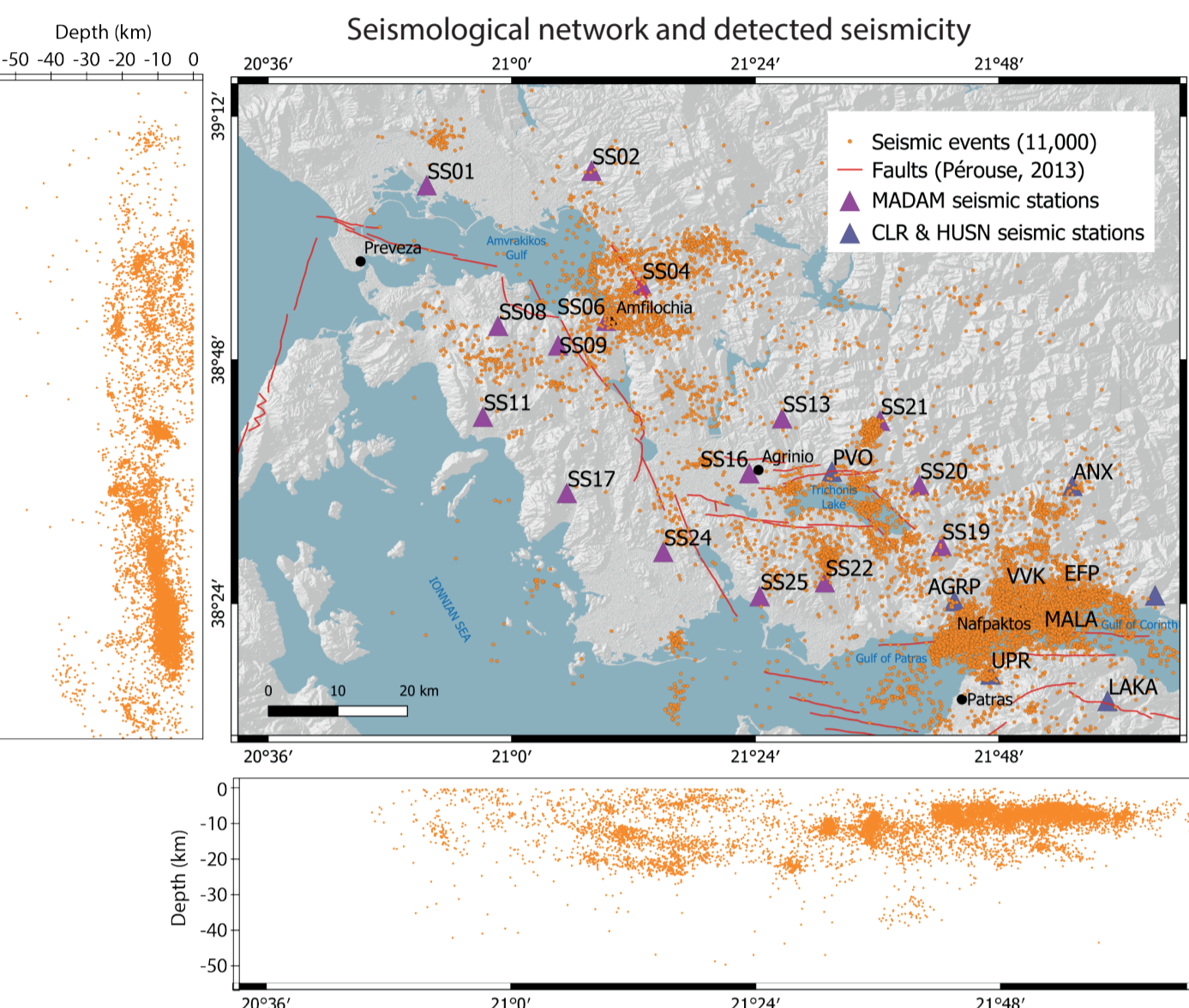
Existing velocity model for the Akarnanian region

Building velocity model

- 2300 seismic events
- Good quality (RMS < 0.35)
- Vp/Vs ratio = 1.85
- Take into account Trichonis lake, Katouna-Stamna Fault system (KSF), Amfilochia and Nafpaktos region

Comparison

- Haslinger 98 model (red) valid on the northern part of the region (Amfilochia region and northern part of KSF)
- Kassaras 2016 (Trichonis) model (purple) show differences with our model that may suggest non-negligible lateral variation on wave velocity



October 2015 - August 2018

11 000 events

Comparison with National Observatory of Athens catalog

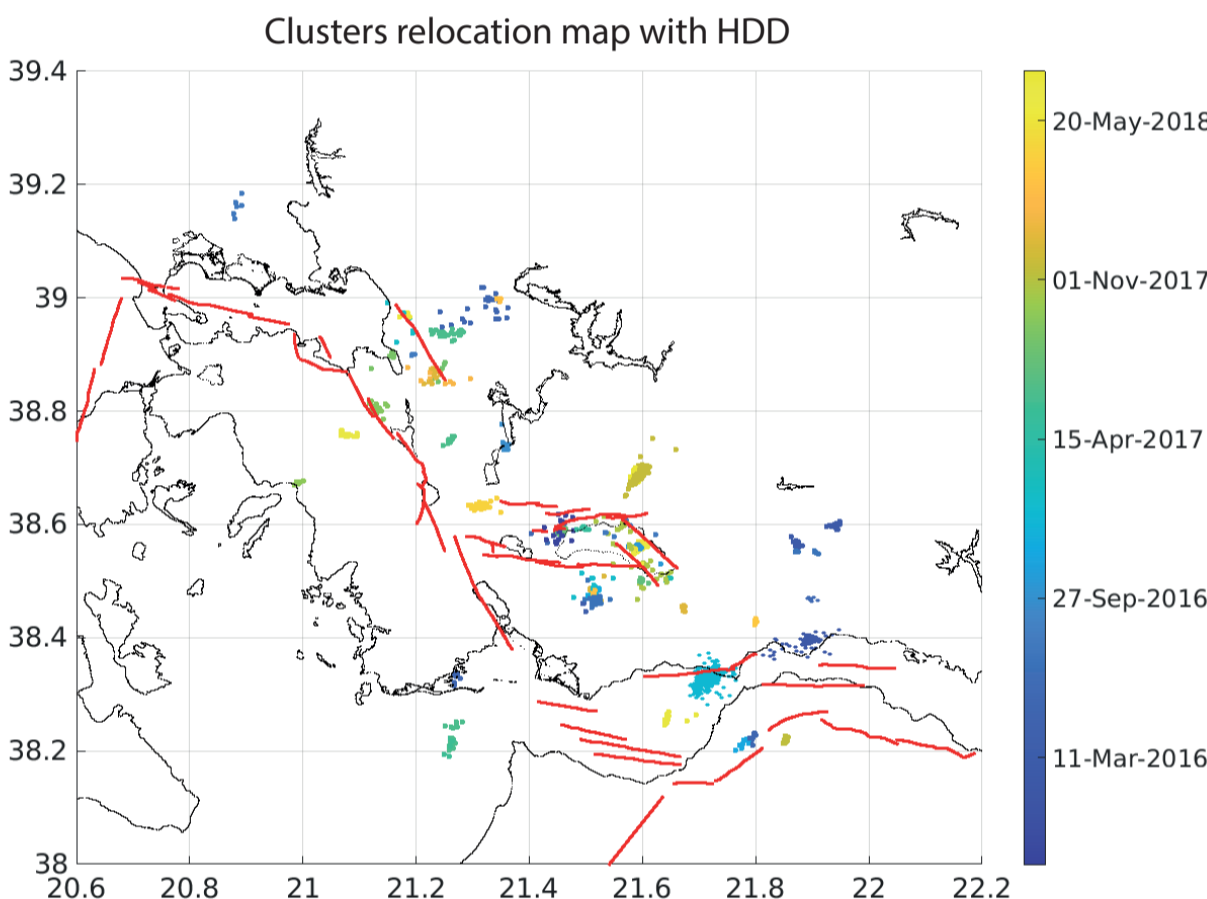
- 3.8 times more located events
- Better constrain in depth

Location seismicity with Lefils 2020 model on map and North-South, East-West cross sections

Temporal and geographical clusters determined with ZMAP software

- Minimum of 6 events
- 10 days of maximum look ahead
- 10 km interaction radius
- Confidence level up to 0.99

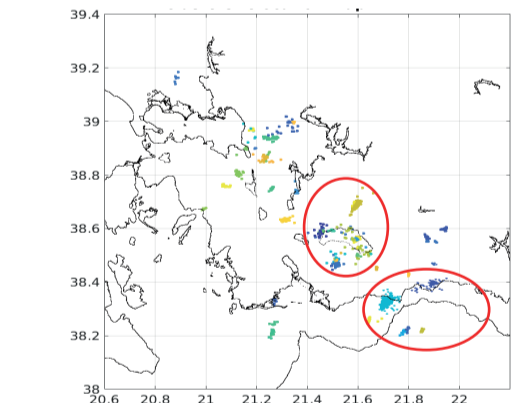
➡ 53 clusters



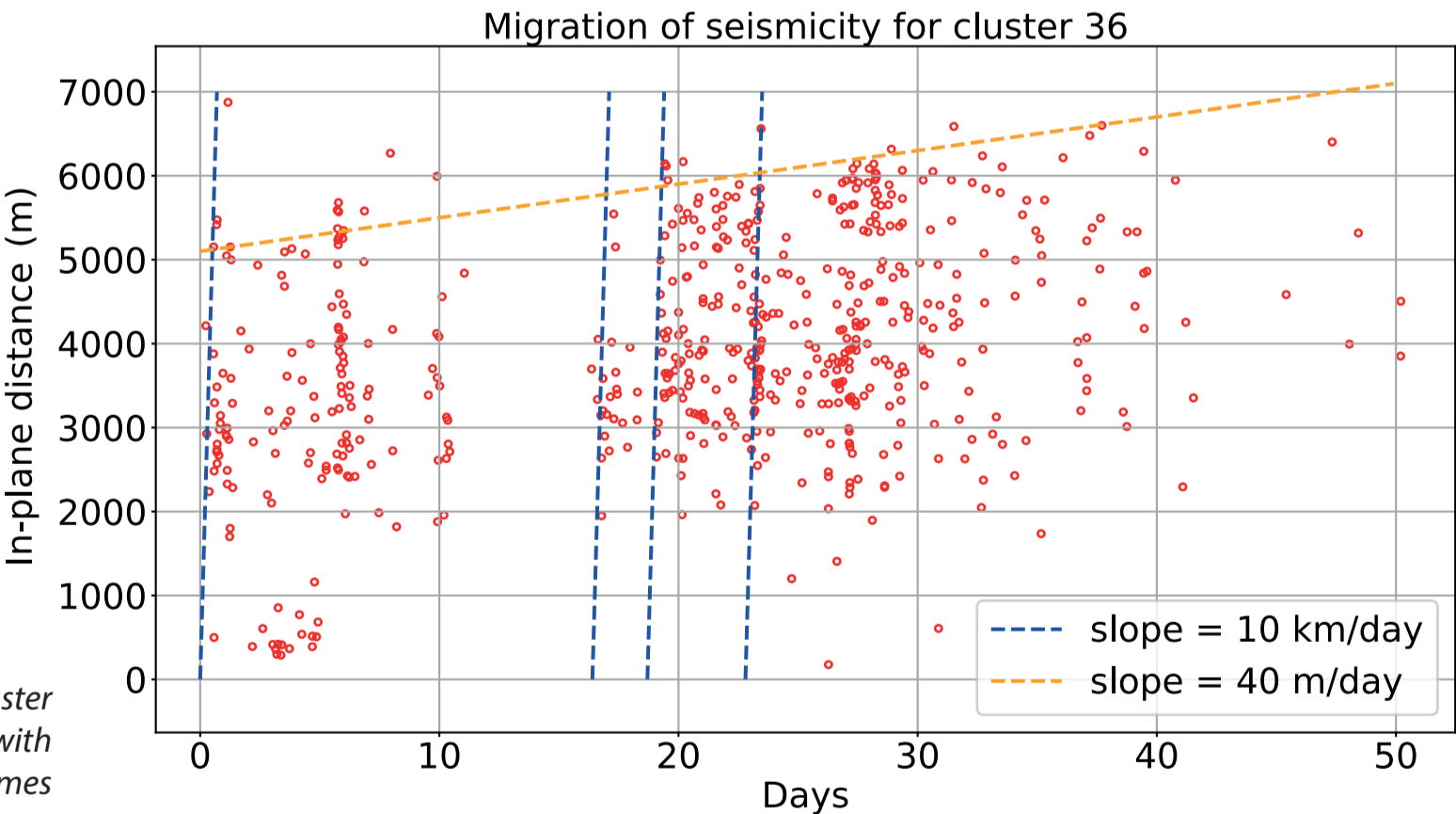
Clusters relocation map, colors correspond to the initiation time of each clusters

Specific regimes detected on Trichonis and Patras - Corinth gulf region (red circle)

Slow, ~ 40 m/day (orange) + Quick, ~10 km/day (blue) =
Slow-slip events induced by fluid migration
(Dublanche & De Barros 2020)

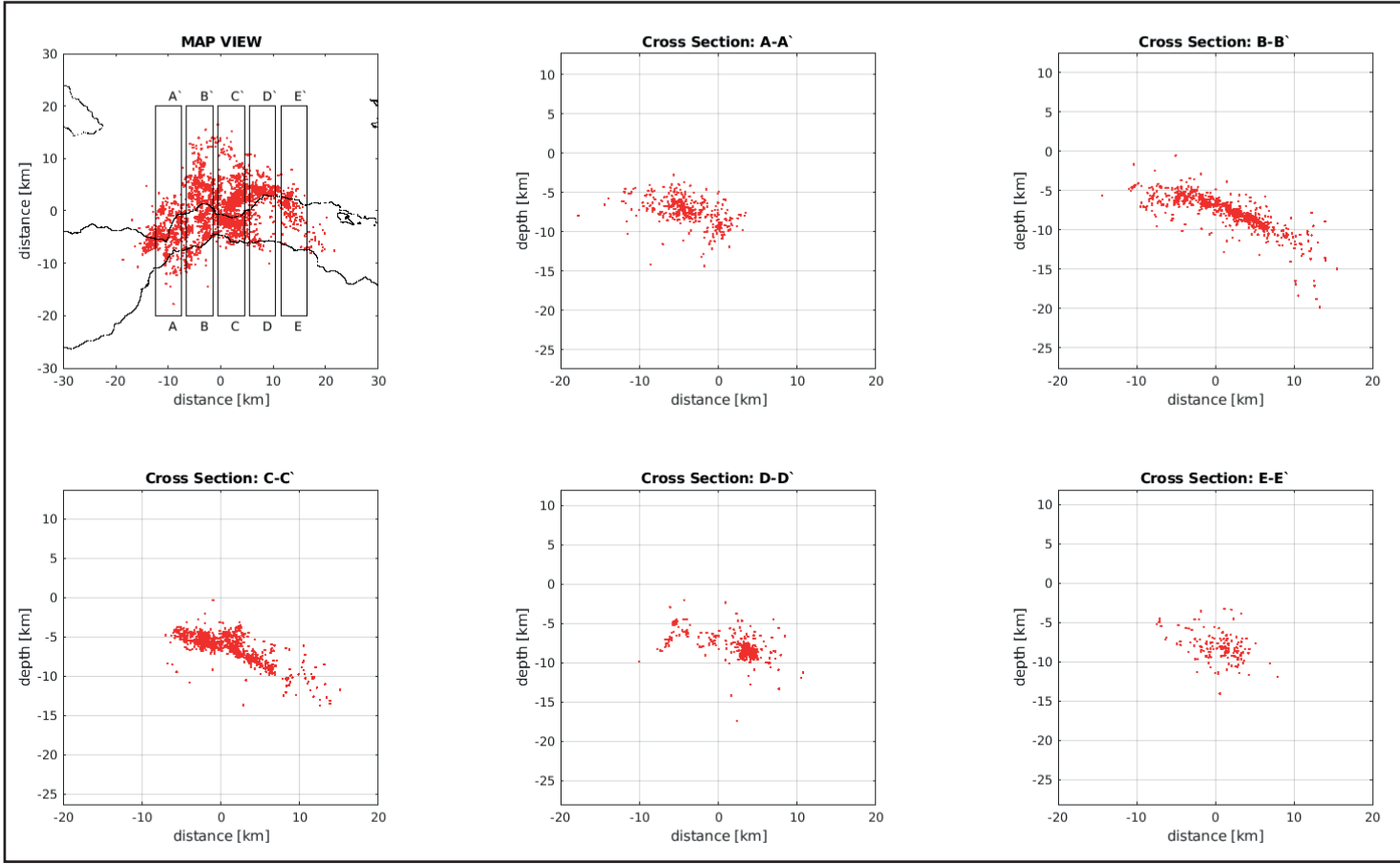
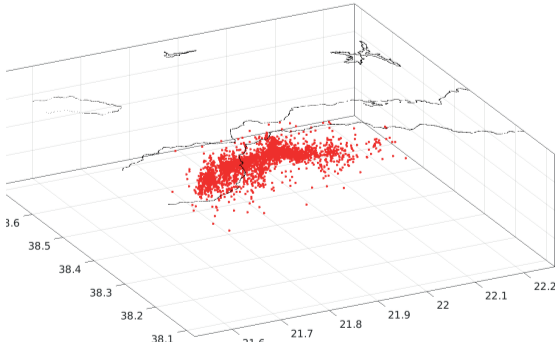
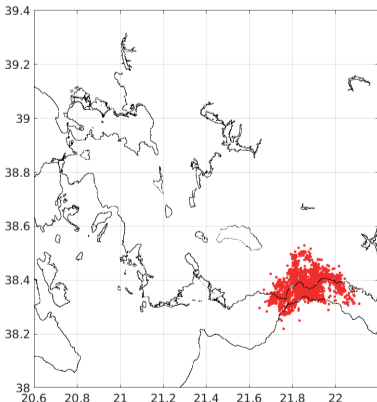


Distance versus time plot for the cluster n°36 (North of Trichonis lake), with interpreted velocity regimes



Seismic structure

- 30 km wide
- 5 - 15 km depth
- Continuously active



Changing in dip direction

- North-East on eastern part
- North-West on western part

South - North cross sections, showing the seismic structure with plane dipping northward