

Tensor Solutions of Small to Moderate Earthquakes along Vlora-Elbasani-Dibra Transversal Fault Zone

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The transversal fault zone Vlora-Elbasan-Dibra (VED) with Northeastern strike dislocated the structure of Albanides along all their width. This transverse fault is the most active zone, which has generated earthquakes along its entire length. This study covers the period from 2004 to 2022. This time period was chosen because it consists of the increase in the installations of digital broadband stations. The seismicity that occurred along VED was well detected by the Albanian Seismological Network and Hellenic Unified Seismic Network, but moderate earthquakes are recorded by almost all seismic stations in the region. For this purpose, data used in this study are broadband waveforms retrieved from online FDSN services which belong to different networks. The data are analysed using the Pyrocko package. This seismic zone has presented interesting characteristics by being activated in different parts of it, continuing from Dumre diapir with complex fault but dominated by dextral strike-slip mechanisms from Elbasani to Dibra region it works as a normal fault with a dextral component of strike-slip, and from Dibra to Mavrovo in North Macedonia as a normal fault in N-E direction.

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Promotional text

This study is the result of collaboration between early stage researchers dealing with the localization of earthquakes and further analyzing to understand the mechanism which trigger the event and dividing natural from man-made events.

Oral preference format

in-person

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