Geophysical Research Abstracts Vol. 21, EGU2019-7155, 2019 EGU General Assembly 2019 © Author(s) 2019. CC Attribution 4.0 license.



Active faults in the middle of the Pannonian Basin?

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Seismicity in the Pannonian Basin is relatively low comparing to the peripherals, and the distribution of earthquake epicenters shows a rather scattered pattern at the first glance. Assigning earthquakes to actual faults is a great challenge in Hungary, although geological structures are well known from numerous 2D seismic profiles for the biggest part of the sedimentary basin.

Microseismic monitoring of areas like this one is essential to investigate characteristics of occurring earthquakes and gives inportant input for seismic hazard assessment. It also helps to identify possibly active underground structures. For the past 25 years, records of a high-sensitivity microseismic monitoring network are available for the central parts of the Pannonian Basin.

Recent investigations gave a picture of underground structures with an unprecedented accuracy for the very central part of the basin. A previously identified fault zone, a part of the Kapos-line has been studied with several geophysical, geological and seismological methods. Using this extensive interdisciplinary knowledge and observations from the past 25 years of microseismic monitoring, we are able to draw some conclusions about the recent activity of the fault zone.