



Post-Roman seismic activity in Mikri Doxipara – Zoni archaeological excavation (NE Greece)

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Mikri Doxipara – Zoni excavation site (MDZ) is located in Evros region (NW Greece), very close to the Greek-Bulgarian-Turkish borders. It consists of a tumulus in which four members of a rich family have been cremated and buried in the beginning of 2nd century AD. The tumulus is very close to the road connecting Hadrianopolis (Edirne) and Philippoupolis (Plovdiv). Four excavation pits since 2002, revealed the cremated remains of three males and one female, along with numerous offerings to accompany them into the afterlife. Furthermore, two brick-built altars serving as platforms for offerings to the dead were found. One of them has been found to be heavily deformed by a system of normal faults, which clearly affect the ground surface of 2nd century. This system is comprised by several roughly E-W trending normal faults, which form a fairly large depression at the altar site. The maximum observable throw of the main S-dipping surface is 1.9 m, but taking into account the secondary features and the total displacement of the N-dipping antithetic faults, the total net displacement is estimated at *ca.* 0.9 m. The fault system affects the Neogene substratum (marls and fine-grained sands) as well as the artificial deposits that formed the tumulus. These deposits were removed during the archaeological excavation, hence no direct association to the faulting is possible at this stage. Taking into account the behavior of normal faults in Greece during historical earthquakes, as well as in paleoseismological research, it is estimated that the earthquake that formed this fault system was a strong one, possible at the order of 6.5. Secondary faulting and jointing, also affecting the Roman ground surface, has been detected in several other sites in various parts of the excavation. Radiocarbon dating of selected soil samples is currently under way, in

order to define the temporal occurrence of this event. The only known strong historical earthquake of the low seismicity region (Edirne 1752) is also discussed in association to the above palaeoseismological data.