

PAST SEISMICITY OF THE FAULT ACTIVATED DURING THE APRIL 18, 1928 EARTHQUAKE ACCORDING TO DATA FROM A TRENCH NEAR POPOVITSA, SOUTHERN BULGARIA

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The Upper Thracian Depression is one of the most seismically active areas, and a precise seismic hazard assessment needs paleoseismological investigations. Almost entirely lack of studies on active faults in Bulgaria controverts our concept based mainly on indications for neotectonic activity. In a frame of cooperation between the Royal Observatory of Belgium and the Bulgarian Academy of Sciences, a trench has been excavated across the fault activated during the Popovitsa M 7.1 earthquake on April 18, 1928. This paper describes the geological record for past fault activity recognized in the trench near Popovitsa. Four events have been established. We found the same value of 1928 offset as it is known by leveling survey before and after the earthquake. The offsets of penultimate and antepenultimate events are close to the 1928 offset. Although absolute ages of the samples from different units are not available yet, we can suppose that the return periods for the last three events are long enough for development of soil profile. A pottery finding suggests that the penultimate event occurred in Roman time.

Established in the trench past activity characterizes only very short section of the fault. More trenches need being done on the fault, and especially, across the sections not activated in 1928 that seem to have different behavior.