

Archaeoseismicity : study of ancient earthquake ruptures at the Antakya Roman aqueduct (Turkey)

Y. Benjelloun¹, J. de Sigoyer¹, J. Carlut², H. Dessales¹, A. Hubert-Ferrari³

(1) Dpt Earth Sciences, ENS, Paris, France.

(2) IPGP, Paris, France.

(3) U. de Liège, Belgique.

Located near the junction between the Levant Fault and the East Anatolian Fault, the ancient city of Antioch-on-the-Orontes was struck by several earthquakes which are well documented by different sources. Thanks to a pluridisciplinary method, using building archaeology, a petrological and mechanical study of the building materials, and different dating techniques, this work aims at dating the deformations visible on the Roman aqueduct of the city, correlating them with known earthquakes, and defining how the Roman builders took into account the seismic hazard.