



## **The late Bronze Age eruption in Thera, South Aegean, and simulation of the associated large tsunami**

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The large Thera eruption in Late Brong Age (17<sup>th</sup> century BC), known as Minoan eruption, has been one of the most important geophysical events that affected the eastern Mediterranean region in the last millennia. The generation of a large tsunami has been documented mainly from tsunami sediment deposits and archaeological evidence. An eruption scenario was developed on the basis of archaeological and geological data and the Minoan tsunami numerical simulation was executed by assuming extensive pyroclastic flow into the South Aegean Sea as the tsunami generation mechanism. An alternative mechanism is based on caldera collapse. The tsunami wave amplitude at the source region is estimated and the tsunami wave propagation in the South Aegean Sea is reproduced. Synthetic mareograms at several coastal sites of Crete and other South Aegean islands are produced. The results of modeling indicate that the maximum wave amplitude up to ~26 m was caused at the northern coast of Crete by massive pyroclastic flow. The possible consequences of the tsunami wave attack on Minoan settlements in Crete are discussed in the light of the results of the tsunami wave simulation.