

A Reanalysis of the AD 365 Tsunami Impact along the Egyptian Mediterranean Coast

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Abstract

The historical tsunamigenic event of 21 July AD 365 destroyed several coastal locations in the Eastern Mediterranean region. The foremost destructive impacts were recorded in Crete and Egypt. The present study re-examines the effect of location, direction, height and time of travel of the tsunami towards the Egyptian coast. Evidently, this tsunamigenic event is related to an earthquake which is identified with a Hellenic Arc subduction-zone event of great magnitude, $M > 8$, as manifested by up to 9 m uplift in western Crete. The maximum run-up height distribution in the front of the Nile Delta was about 9.5 m in Alexandria, while those of the neighboring cities were 7.1 m, 4.9 m, and 1.9 m at Rashid, Damietta and El-Arish, respectively. Data obtained from this study is essential to evaluate the tsunami hazards along the Egyptian coast.

Key words: AD 365 tsunami, tsunami magnitude, tsunami intensity, Eastern Mediterranean region.