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Historical earthquakes and tsunami sources in Eastern Mediterranean Sea

A. Fokaefs, G. Papadopoulos

Institute of Geodynamics, Athens, Greece (anna@gein.noa.gr / Fax: +30210-3490165 / Phone: +30210-3490165)

The easternmost side of the Mediterranean Sea is geodynamically characterized by important seismicity associated mainly with the Cyprean arc and the Levantine fault systems. Historical documentary sources indicate that many strong earthquakes were generated in the historical era. Some of the strong earthquakes were associated by tsunami waves, the most important of them being the 92BC, 551AD, 1034, 1068, 1202, 1222, 1303, 1546 and 1759 ones. In more recent times, slight sea waves were caused on the coasts of Israel and Cyprus by the earthquakes of 18 June 1949 and 10 September 1953, respectively. We prepare a historical earthquake catalogue for the area. An effort has been made to assess earthquake magnitudes from reported intensities and revise previous estimates. A tsunami catalogue is also prepared according to the standards of the New European Tsunami Catalogue and assess their maximum intensity by the classic 6-grade Sieberg-Ambraseys scale and the recently proposed 12-grade Papadopoulos-Imamura scale. We reject the hypothesis, introduced by archaeologists, that the destruction of Kourion, near Pafos, SW Cyprus, is attributed to the 21 July 365AD large Mediterranean earthquake and tsunami, because of two reasons: first, this event very possibly took place not in the Cyprean arc but in the western Hellenic arc and, second, other events occurring near Cyprus between 342 and 375 seem more likely to be responsible for the Kourion destruction. The main earthquake rupture zones are determined and the tsunami potential in probability terms is assessed as a function of the earthquake size.