EFFECTS OF EARTHQUAKES ON THE MINOAN «ROYAL VILLA» AT HAGHIA TRIADA (CRETE)

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ABSTRACT

Examination of damages affecting the buildings of the archaeological site of Haghia Triada (southern Crete), suggests that this Minoan settlement was probably destroyed by a major seismic event characterized by MKS intensities of IX-X and occurred in the Neo-palatial (1450 B.C.) periods. Geological and morphological studies carried out in the neighbouring areas show the occurrence of E-W trending Quaternary normal fault segments (Spili and Haghia Galini faults) that control the present topography and morphology, and exhibit steep young scarps mostly Holocene in age. These fault segments are related to a NW-SE extension direction which is consistent with that indicated by the available focal mechanisms of the earthquakes occurring in this area in the last 50 years. Combining structural and seismic data we can infer that the Spili and Haghia Galini fault segments could represent good candidates to be considered active faults generating large earthquakes (M~6.5) that were responsible for the damages of Haghia Triada. This hypothesis suggests that the Minoan palatial centres were destroyed by several large earthquakes related to ruptures along distinct fault segments rather than by a single catastrophic event that caused the abrupt destruction of the Minoan civilisation in the eastern Mediterranean.