

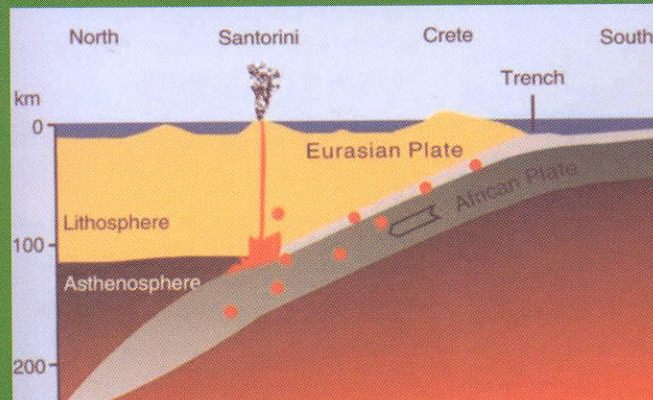


European
Seismological Commission



31st General Assembly

Programme and Abstracts



Creta Maris Conference Center
Hersonissos, Crete island, Greece
7 12 September, 2008

Seismic Fractures Related to the NW Peloponnesus (SW Greece) Earthquake (MI=6,5R 8-6-2008)

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On June 8th 2008, and 12:25:28:0 UTC, an earthquake of ML=6,5 and D≈15km stroke NW Peloponnesus. The epicenter is located in the wider Andravida area (Western Greece), according to formal earthquake announcement of the National Observatory of Athens. Casualties reported two people were killed, 214 injured and extended disasters took place to Ilea and Achaia prefectures. More than 15 villages and cities have reported significant damage and three of the villages were evacuated due to rockfall danger in potential aftershock. Reported until today, 150 houses collapsed, 500 houses were rated as inhabitable, and 350 repairable. The moment tensor solutions of the earthquake (HARV, INGV, USGS, ETHZ, AUTH, NOA) demonstrate a strike-slip fault, trending NE-SW. It should be mentioned that until now the allocation of the aftershocks prove the same trend as the fault. In Kato Achagia area, seismic fractures have been observed, trending NE-SW, showing dextral movement and causing deformations and breaks in railway lines as well as breaks in concrete blocks, water supply network and soil fractures. The horizontal displacement of either side blocks is estimated to be around 20cm. The length of the fractures is larger than 300m. In addition, adjoint extensional fractures trending NW-SE were allocated in the misoseismal area. Taking into account all the mentioned above, a full geometrical, dynamic, kinematic and spatial correlation is being noticed. This indicates that the NE-SW trending seismic fractures should be the strike-slip fault zone's countenance on the surface, which had no surface occurrence until today. In conclusion, there should be mentioned that uncommonly severe damages have occurred in buildings, infrastructures and residential areas along the fracture's surface.

Preliminary Report on the Principal Seismological and Geotechnical Engineering Aspects of the Mw=6.5 Achaia-Ilia (Greece) Earthquake on 8 June 2008

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The Achaia-Ilia (Greece) Earthquake occurred on June 8, 2008 at 15:25 local time. The earthquake was reported to have been felt as far away as 350 km from the epicentral area. Moment tensor solutions provided by multiple organizations are quite consistent with respect to focal mechanism (indicating a dextral strike-slip event on a nearly vertical fault) and moment magnitude (6.3-6.5). Subsequent analysis of aftershock distributions reveals the fault strike to be approximately 210° on a previously unmapped fault. Preliminary analysis suggests that the fault limits may correspond to a NE striking normal fault near the Kato Achaia coastline and Pinios Lake. The mainshock was recorded by 21 strong motion instruments operated by ITSAK and the University of Patras, Department of Civil Engineering, at distances from the surface projection of the fault ranging from approximately 15 to 350 km with PGA values varying between 1mg and 176mg. The data are somewhat weaker than predicted by an NGA ground motion prediction equation at short period but are reasonably consistent with predictions for 1.0 sec spectral acceleration. Surface rupture of the fault has not been observed, which is not surprising given the focal depth for this strong