



Preliminary results of the Kythira January 8, 2006 aftershock sequence.

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On January 08, 2006 at 11:34:53 (UTC) a strong earthquake of magnitude $M=6.9$ shook Greece and most of the eastern Mediterranean causing only minor damages and no casualties.

The earthquake's epicenter was located at $36, 21^{\circ}\text{N} - 23, 34^{\circ}\text{E}$ at a depth of about 70 Km near the island of Kythira.

The main shock as well as the aftershocks were recorded by the stations of the seismological network of the Laboratory of Geophysics and Seismology of the Technological and Educational Institute of Crete in Chania which is the closest seismological observatory in southern Aegean, about 90 Km SE of the epicenter. The network has recorded the aftershock sequence in the broader area with magnitudes up to about 5.0 on the Richter scale. The evolution of the earthquake sequence is studied and data are analyzed.

Analyses include the relocation of the aftershocks and proposal of a new 1D model of the earth structure of the southwestern part of the Hellenic Arc. The aforementioned implementations will help us elucidate more the seismic behavior of the broader area which seismically is one of the most active parts of the Western Eurasia due to the subduction of the African lithosphere under the Aegean microplate and has a long historical record of devastating earthquakes with magnitudes up to about 8.0.

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