Preliminary results from the study of a seismic swarm occurred in February 2008 in NW Peloponnese, Greece

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INTRODUCTION

The Preliminary report of a seismic swarm occurred in February 2008 in the Peloponnese (NW Greece, 37°40′ N, 22°35′ E, Mw 5.0) has been published (Makropoulos, 2008). The swarm occurred in a remote part of the Peloponnese, close to the island of Elba in the Gulf of Corinth, and consisted of more than 2000 earthquakes with magnitudes between Mw 0.5 and Mw 4.6 (Kaviris, 2008). The swarm was divided into two main phases: a first phase during February 2008 with more than 1000 earthquakes, and a second phase during March 2008 with more than 1000 earthquakes.

METHODOLOGY

The study involved the analysis of seismic waveforms and the calculation of source parameters using a variety of methods, including waveform correlation and coherence analysis. The study was conducted using the laboratory of geophysics and geoenvironment of the University of Athens.

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RESULTS

The study revealed that the seismic swarm occurred in a remote and isolated area, which was previously seismically inactive. The swarm was characterized by a large number of small earthquakes, which were followed by a few larger events. The analysis of the seismic waveforms revealed that the swarm was caused by a dextral strike-slip mechanism, with a maximum moment of Mw 5.0. The analysis of the seismic waveforms also revealed that the swarm was triggered by a foreshock, which occurred on 2001-02-09.

The study also revealed that the seismic swarm was associated with a significant increase in seismicity in the region, which was observed in the following months. The analysis of the seismic waveforms revealed that the seismic activity was associated with a significant increase in seismicity in the region, which was observed in the following months.

LOCAL MECHANISMS - MODELING

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CONCLUSION

The study revealed that the seismic swarm occurred in a remote and isolated area, which was previously seismically inactive. The swarm was characterized by a large number of small earthquakes, which were followed by a few larger events. The analysis of the seismic waveforms revealed that the swarm was caused by a dextral strike-slip mechanism, with a maximum moment of Mw 5.0. The analysis of the seismic waveforms also revealed that the swarm was triggered by a foreshock, which occurred on 2001-02-09.

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