



## **Deformation study in Central Greece using 20 years of GPS data**

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Central Greece is a region recognized for its intense tectonic activity with the main characteristics being the extension in the North-South direction. This extension is revealed mainly in the form of large parallel grabens. Among these rifts is the Corinth Gulf, which is the most active tectonically, the basin between Parnassos and Kallidromo Mt, the Locris basin and the graben of North Evoikos Gulf, while in the south lays the Thebes basin and the South Evoikos Gulf.

Since the late eighties the Laboratory of Higher Geodesy and the Dionysos Satellite Observatory of the National Technical University of Athens, in cooperation with several National and International Universities and Institutions have established, in various Greek areas, of high seismic activity, geodetic networks in order to monitor tectonic displacements. These geodetic networks were observed periodically using Satellite Geodesy techniques and in recent years almost entirely GPS.

In this study all the available GPS data, referring to the broader area of Evia, Attiki and Viotia, for the years 1989 to 2008, are analyzed. The displacement field and its temporal changes for the area between the two major geological features, the Corinth Gulf and the Evoikos Gulf, are investigated.

All the kinematic models that were used do not confirm that the area of study is deforming homogeneously, while an indication of a discontinuity has been detected.