

The Gulf of Corinth "CORSEIS" permanent GPS network: framework and perspectives

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The Gulf of Corinth is a quaternary asymmetric rift bordered on the South by several N-dipping active normal faults. It is one of the most seismic regions in Europe. Two earthquakes occurred in the area during the last ten years: on November 18, 1992 near Galaxidi ($M_s=5.9$) and on June 15, 1995 near Aigion ($M_s=6.2$). Since 1990, ground deformation studies have been regularly performed in the Gulf of Corinth by means of GPS, firstly, in order to monitor the seismic strain of the gulf, and, secondly, to detect the deformation field related to the earthquakes. Over the 10 years period the rifting rate is 1.5 cm/yr. In the framework of the EU project CORSEIS, the installation of 5 permanent GPS stations in the Aigion area is planned for 2001. The data will be automatically collected at 30 seconds and 1 second sampling rate. Those GPS instruments will be integrated into a dense array of various networks set-up to monitor the earthquake cycle there and to detect strain transients including earthquake precursors.