# The Geodetic contribution of Auth at HELPOS project

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Greece is among the most seismically affected areas in EU, where more than 50% of seismic energy in Europe is released. In order to understand the processes as well as the possibility of forecasting and mitigating the effects of such events the Hellenic Plate Observing System (HELPOS) project has already launched which requires the coordination of national facilities and expertise. HELPOS is a distributed network of geosciences and earthquake engineering observations, operated by the Greek Research Institutions and Universities. More specific, Departments and Laboratories from two Research Centers, five Universities, one Public Organization and one private enterprise, including- for the first time ever in the Greek Earth community- forty two Research Units, are involved in the HELPOS. The partnership integrates and facilitates the use of these infrastructures and access to data for research, provides services and access to several options like, metadata products and tools. The project is co-funded by the European Regional Development Fund and National Funds.

The Auth (GNSS_QC) research team of department of Geodesy and Surveying will contribute to the GNSS data pool providing rinex data from five permanent stations distributed mainly at northern part of Greece. The team is operating a server which process GNSS data using the Bernese software (v5.2) according European guideline standards. The aim of the AUTh's geodetic team is to disseminate scientific data and study the geodetic concept. For that reason, GNSS_QC are going to estimate coordinates, strain rates as a periodic product for HELPOS using GNSS velocity field of whole Greek area. To accomplish this, software packages should be implemented, and several algorithms will be developed and installed at dedicated processing Server. Also, station data will be retrieved from partner's data centers to Auth data storage to contribute to the local processing scenario of HELPOS stations. The present study shows relevant results from several research (geodetic) activities of GNSS_QC where similar processing strategies will follow.