



Ground deformation model for Tenerife (Canary Islands, Spain) from TEGETEIDE GNSS stations observation

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TEGETEIDE GNSS network is composed of seven benchmarks distributed over Tenerife Island, two of them are permanent stations. The whole network has been observed periodically from 2005 at least twice a year.

Processed data using Bernese 5.0 software indicates different vector displacement pattern, as in magnitude as in direction, which expected from the African plate movement, suggesting the activity of other geodynamic process in the Island.

The TEGETEIDE ground deformation model suggest the action not only the tectonics, but also the volcanic activity in an island where during 2004 a reawakening of the Teide volcano was detected. In this sense, the use of precise space-geodetic techniques to study the present-day dynamics of Tenerife is essential for a better knowledge and forecasting of the volcanic evolution during periods of crises, in an island of one million inhabitants and 5 million tourists a year.