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# Multi-parameter observations in the Ibero-Moghrebian region: the Western Mediterranean seismic network (WM) and ROA GPS geodynamic network

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The plate boundary between Eurasia and Africa plates crosses the called "Ibero-Maghrebian" region from the San Vicente Cape (SW Portugal) to Tunisia including the South of Iberia, Alboran Sea, and northern Morocco and Algeria. In this area, the convergence, with a low rate, is accommodated over a wide and diffuse deformation zone, characterized by a significant and widespread moderate seismic activity [Buforn et al., 1995], and the occurrence of large earthquakes is separated by long time intervals.

Since more than hundred years ago San Fernando Naval Observatory (ROA), in collaboration with other Institutes, has deployed different geophysical and geodetic equipment in the Southern Spain – North-western Africa area in order to study this broad deformation zone.

Currently a Broad Band seismic net (Western Mediterranean, WM net) is deployed, in collaboration with other institutions, around the Gulf of Cádiz and the Alboran sea, with stations in the South of Iberia and in North Africa (at Spanish places and Morocco), together with the seismic stations a permanent geodetic GPS net is co-installed at the same sites. Also, other geophysical instruments have been installed: a Satellite Laser Ranging (SLR) station at San Fernando Observatory Headquarter, a Geomagnetic Observatory in Cádiz bay area and some meteorological stations.

These networks have been recently improved with the deployment of a new submarine and on-land geophysical observatory in the Alboran island (ALBO Observatory), where a permanent GPS, a meteorological station were installed on land and a permanent submarine observatory in 50 meters depth was also deploy in last October (with a broad band seismic sensor, a 3 C accelerometer and a DPG).

This work shows the present status and the future plans of these networks and some results.