

Portuguese Activities related with ES1206 GNSS4SWEC

GNSS - Meteorology status

- **Areas of Research:**

- a) GPS data processing for tropospheric products using GIPSY-OASIS; Improvement on the solutions testing different parameterization.
- b) Development of new software using parallelized Algebraic Reconstruction Techniques (ART) for the water vapor tomography;
- c) Analysis of the influence of a-priori values on the derived ZTD solutions. The daily boundary problem.
- d) Correlation between (ocean and atmospheric) loading and PWV.

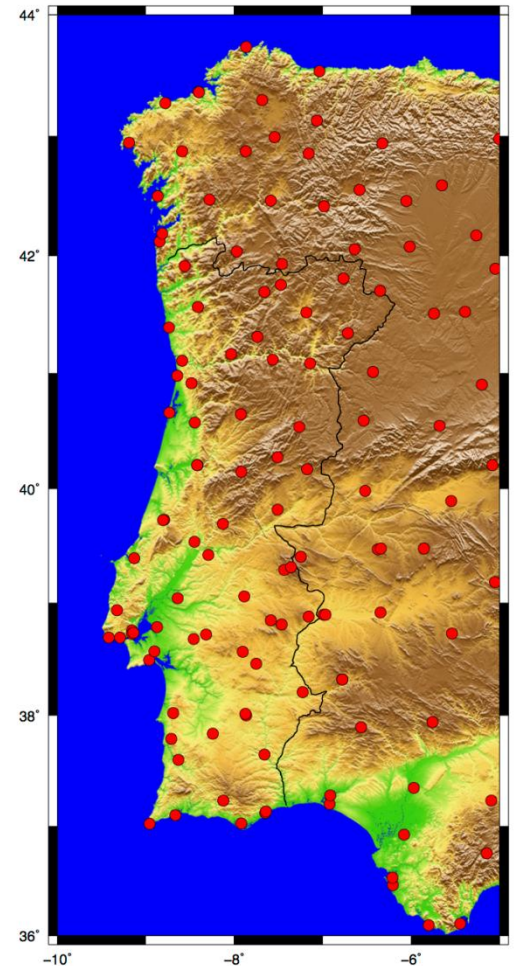
NUVEM Project

NUVEM - New methods to Use GNSS Vapor Estimates for Meteorology of Portugal

The objective is to include GNSS-PWV estimates in the weather forecast of Portugal, especially in the decision process of warning dissemination of severe weather situations. To achieve such objective, the NUVEM project is divided in two major components:

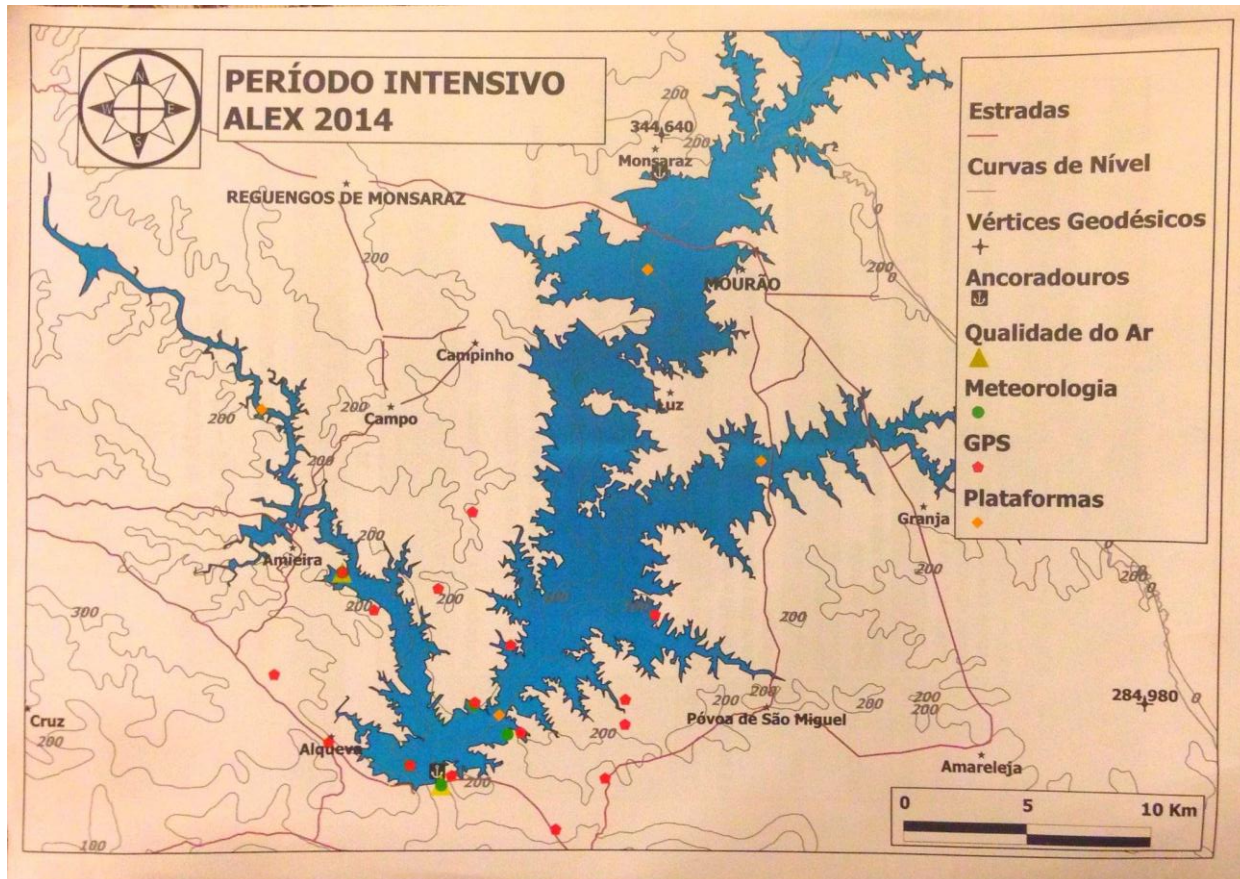
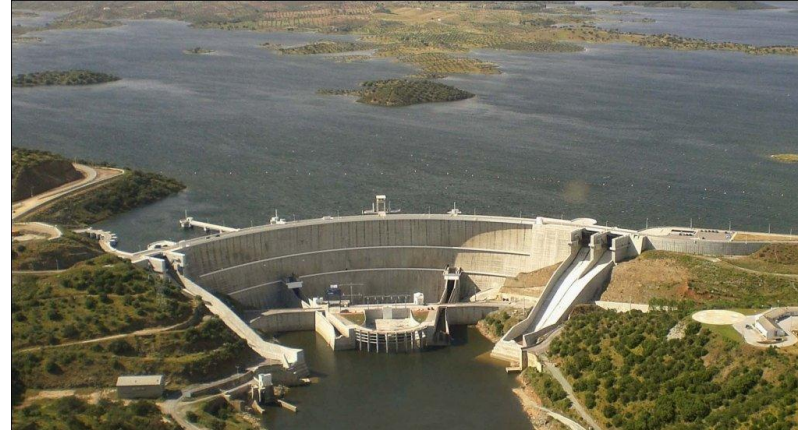
a) development and implementation of methods to compute accurate estimates of ZTD (Zenith Total Delay) and derived PWV (Perceptible Water Vapour) in near real time.

b) integration of these estimations in the now casting operations done at IPMA (Portuguese Meteorological Service).



ALEX 2014 – GNSS network

ALqueva hydro-meteorological Experiment



It includes observations of the water column, atmospheric column, and water-air interface.