The ALEX 2014 Field Campaign

a. Continuous observations
During 4 months a set of continuous measurements of several parameters were performed, namely:
• the energy fluxes (radiative and sensible and latent heat), CO₂ and H₂O over the reservoir
• near surface meteorological stations: temperature, humidity, wind, precipitation and pressure.
• the thermal profiles of the water column
• Air quality.
• solar resource: Atmospheric Electric Field sensor

b. Sampling
Several observations were made on a monthly basis:
• water column profiles of dissolved oxygen (mg DO L⁻¹ and %), pH, oxidation-reduction potential
• Turbidity and the spectral irradiance at different depths
• Microscopic and molecular characterization of cyanobacteria present in different locations of the Alqueva reservoir

The ALEX 2014 comprised an Intensive Observation Period (IOP) on 22, 23 and 24 of July 2014, during which:
• 18 meteorological balloons with meteorological radiosondes were launched.

FIGURE 1 Map of the Experimental setup

- the Boundary layer were characterized with a Ceilometer
- A GPS network (15 GNSS stations) were installed in order to map the water vapor
- Geiger sondes (Harrison et al., 2012) were coupled to the meteorological radiosondes in order to obtain the atmospheric ionization profile
- The Vertical distribution of O₃ and NO₂ were obtained by the Spectrometer for Atmospheric Tracers Measurements
- Supports

Supports

http://www.alex2014.cge.uevora.pt

ABSTRACT
The Alqueva hydro-meteorological experiment, ALEX 2014 (http://www.alex2014.cge.uevora.pt) was an integrated field campaign with measurements of chemical, physical and biological parameters at different experimental sites in the Alqueva reservoir and in its surrounding region. With the main purpose of studying the lake-atmosphere interactions, the ALEX 2014 took place from June to September and comprised three days Intensive Observation Period (IOP) from 22 to 24 July.