Thermal variability of the upper oceanic layer in the Canary Islands

E.Pérez-Martell, O.Llinàs, M.J. Rueda and A.Cianca

The studies related to the climatic change and the global warming are one of the fundamental topics in science due to the effects they have on life in the Earth.

To understand what happens at a global level, it is necessary to study the marine environment due to the strong coupling between the atmosphere and the ocean. In this sense, during the pasts, different international investigation programs have been proposed, as in the case of WOCE (Word Ocean Circulation Experiment) and of the recent CLIVAR (Climate Variability and Predictability). Both characterized by a strong observational character.

In both programs is relevant the study of the long range of seawater temperature. The measures are performed through repetitive sections with certain periodicity using XBT (expendable bathytermograph), using " ships of opportunity ", in which is installed a data acquisition system. There are numerous section of XBT all over the word, carried out in ships which carry on different activities (merchant ships, commercial vessels, passenger ships, hospital ship, warship, etc.).

In our study, we present the thermal distribution of the upper layer of the ocean. We have measured and analyzed time series of data from , obtained in a meridional section at the South of the Canary Islands, repeated monthly during a period of approximately eight years. An interannual variability of the thermal structure is observed, with its consequences at a climatic level.

References:

-**Hanawa, K., Yasuda, T.** (1992). New detection method for XBT depth error and relationship between the depth error and coefficients in the depth-time equation.
J.Oceanogr. 48, 221-230.

-**Kezele, D.B.,Friesen, G.** (1993). XBT Test data comparison and analysis.Sea Tech. 34,15-22.

-**Pérez-Martell, E., Llinàs, O., Onken, R., Zenk, W., (1994).**Thermal variability in the Central Waters between Gran Canaria and the Mauretanean Continental slope.
Procc.Oceanography and Marine resources in the Central-East Atlantic. (enpresa).

-**WOCE.** (1993). An envaluation of the WOCE Atlantic VOS XBT network. FOCE Notes, 5,6-7.