



Multidisciplinary permanent sea floor observation at Antares Site

Anne Deschamps (1), Dominique Lefèvre (2), and the BJS/TEXREX Team

(1) Géoazur, CNRS/UNS/IRD/OCA, Sophia Antipolis, France (deschamps@geoazur.unice.fr), (2) LMGEM, Centre d'Océanologie de Marseille, CNRS/INSU et Université de la Méditerranée, Marseille, France (lefevre@univmed.fr)

Three modules of a permanent oceanographic sea floor observatory have been connected on beginning November to the shore at Antares site in Ligurian Sea. Power and data transmission are controlled by a secondary junction box (SJB) connected to the Antares (Neutrino telescope) available facilities. The MII is an Instrumentation Interface Module on which were installed oceanographic sensors: O2, absolute pressure, CTD and turbidity sensors, a BioCamera, a currentometer. Other connectors are available on which could be added an acoustic modem to communicate with a distant stand alone instrument. The "Sismo" module controls the data flow from a broad band velocimeter, an accelerometer, a differential pressure gauge and an absolute pressure sensor. The last module is a Deep Sea Net node, proposed for a light data transmission in a distributed observatory over hundreds of kilometers. Data in real time are collected and transmitted to relevant data base and laboratories for scientific purposes. They will contribute to a permanent long term acquisition of fundamental sea floor parameters. Seismological data are introduced in the real time data flow analyzed for earthquake detection and location. Pressure data is transmitted to the RATCOM center, a prototype of regional tsunami alert center in Ligurian Basin.

We present data collected during the first five months of recording and analyze signal to noise ratio and the possible correlations: seismic noise on the 3 velocity channels in the 0.003-20 Hz band, and comparison with the previous records obtained on a similar sensor in 2005-2007. We will also analyze correlation between differential pressure and vertical ground motion velocity, between records of the two piezometric sensors (tsunamimeters) which are 100 m apart.