

From the Geosphere to the Cosmos: ASPERA Workshop

Abstract

Marine sciences at Antares

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The completion of the ANTARES high-energy neutrino telescope in the deep Mediterranean Sea has enabled a large program of synergetic research in the fields of Earth and Sea sciences. Located at a depth of 2475m, 42km from the town of Toulon in the South of France, ANTARES provides an unique infrastructure for the deployment of real-time, high-bandwidth, high-power sensors at this extreme location. In the presentation, the results from a variety of instruments connected to ANTARES will be described; including seismographs, acoustic hydrophones, sensors for oceanographic parameters (sea currents, oxygen, temperature etc) and video cameras for studies of bioluminescence. The long-term measurements provided by these instruments already provide data of interest to a wide field of sciences including biology, environmental sciences, geology, geophysics and oceanography. Deep sea observatories such as ANTARES, and in the future KM3NeT, have the potential to play a key role in the assessment of global warming, climate change and geo-hazards.
