

Mediterranean Neutrino Telescopes

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Most of the information that we have about the Universe has been conveyed by photons originating in electromagnetic processes. Neutrino telescopes offer the possibility to see the Universe with new “eyes,” allowing the study of the most powerful cosmic accelerators via high-energy neutrinos generated in hadronic processes.

In the Mediterranean Sea, a number of efforts (ANTARES, NESTOR and NEMO) are ongoing, to help develop the technology and techniques necessary to construct a multi-cubic-kilometer, deep-sea neutrino telescope. The most advanced of these projects, ANTARES, is located at a depth of 2475 meters offshore from Toulon, France. Various aspects of detector construction, calibration methods, and recent results obtained with the first ANTARES data will be detailed. The planned next-generation cubic-kilometer telescope, KM3NeT, will also be presented.

Such deep-sea infrastructure also provides synergetic opportunities for research in oceanography, seismology and marine sciences; some examples of these interdisciplinary activities will also be highlighted.

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