

Recent achievements and scientific results of KM3NeT

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KM3NeT is a multidisciplinary observatory, for the detection and study of cosmic neutrinos and their sources in the Universe, as well as the measurement of neutrino properties such as the mass hierarchy and oscillation parameters.

Two underwater detectors are under construction in the Mediterranean Sea. The configuration of the ARCA detector, located off-shore Sicily, Italy, is optimised for the detection of neutrinos in the energy range of 1 TeV-100 PeV. The ORCA detector off-shore Toulon, France is configured for the measurement of neutrinos of a few GeV-10 TeV. At present, 19 and 10 detection units are taking data at the ARCA and the ORCA sites, respectively. Installation of additional detection units is foreseen in the next few years.

In this contribution the main physics results obtained with ARCA and ORCA, still in their partial configuration, will be reported. In the context of the multi-messenger scenario, the KM3NeT online alert system will be presented. Finally, an overview of the expected performances of the full detectors will be reviewed.

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