

Status and prospects of KM3NeT, the next-generation neutrino telescope in the Mediterranean Sea

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Using novel technology, the KM3NeT Collaboration is building a very large neutrino telescope in the Mediterranean abyss. KM3NeT comprises two detectors, ARCA and ORCA. ARCA is under construction at 3,500 m depth, about 80 km offshore the coast of Porto Palo in Sicily (Italy). It is optimised for high-energy measurements (TeV-PeV) to perform neutrino astronomy with unprecedented sensitivity. From its location in the Mediterranean Sea, ARCA will have an optimal view of the southern sky, including the Galactic Centre. ORCA is being built at 2,500 m depth, about 40 km offshore Toulon (France). With a detector configuration denser than ARCA, it is optimised for lower-energy measurements, down to few GeVs, to investigate neutrino oscillations. The science case of KM3NeT, the status, the results obtained with the first data and the construction plans will be illustrated in this talk.

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