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Status of the KM3NeT/ARCA telescope

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The KM3NeT Collaboration is constructing a research infrastructure hosting the next-generation underwater neutrino observatory. It will be distributed in two sites in the Mediterranean Sea with different configurations: ORCA (Mton scale 2500 depth offshore Toulon (France)) and ARCA (Gton scale, 3500 m offshore Capo Passero (Italy). The KM3NeT/ARCA is the high-energy component and is dedicated for the search of extraterrestrial neutrino sources in the TeV-PeV range. ARCA, with 1 km3 of instrumented volume, will offer independent confirmation of the IceCube flux within about one year of data taking. Furthermore, it will profit of the advantage of this location (better visibility of the Galactic Centre and Galactic Plane compared to the South Pole) and better angular resolution. Optimized to study point-like neutrino fluxes, KM3NeT/ARCA will therefore open the path to identifying their sources. The ARCA telescope is currently under construction about 100 km off-shore Portopalo di Capo Passero (Sicily), at a depth of 3500 m. The first lines have been deployed and the analysis ongoing to validate the detector performance. We will present the status of KM3NeT/ARCA and the future prospects of the project.

Experimental Collaboration

KM3NeT Collaboration

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