



Contribution ID: 316

Type: **oral**

KM3NeT status and recent results

Wednesday, 25 September 2024 11:45 (25 minutes)

The KM3NeT collaboration is building two underwater neutrino detectors in the Mediterranean: the ARCA (Astroparticle Research with Cosmics in the Abyss) and ORCA (Oscillation Research with Cosmics in the Abyss) detectors.

ARCA is located off the Sicilian coast of Capo Passero and aims to detect and identify astrophysical neutrino sources. The ORCA detector, located off the French coast of Toulon, has been optimized for the detection of atmospheric neutrinos in the GeV range, with the main aim of studying the fundamental properties of neutrinos. The two detectors, ARCA and ORCA, will allow the study of neutrino astronomy from MeV to a few hundreds of PeV. In the near future the KM3NeT detectors will play also an essential role in the multi-messenger astronomy.

The first detection units, which are strings containing the optical sensors, have already been deployed by the KM3NeT collaboration at the French and Italian sites. The two detectors are currently taking data in partial configurations and are already producing physics results, demonstrating the great potential of the two detectors for the coming years.

New and exciting results in both astrophysics and neutrino oscillation will be presented, together with the status of detector construction and future perspectives.

Primary author: CONIGLIONE, Rosa (Istituto Nazionale di Fisica Nucleare)

Presenter: CONIGLIONE, Rosa (Istituto Nazionale di Fisica Nucleare)

Session Classification: IV Plenary