



Contribution ID: 416

Type: **Invited talk in a parallel session**

Physics results of KM3NeT and update on the construction phase

Tuesday, 9 July 2024 15:25 (25 minutes)

KM3NeT is a multi-site underwater detector, designed to detect and study cosmic neutrinos and their sources in the Universe, and improve the measurement of the neutrino oscillation parameters. Two neutrino telescopes are under construction in the Mediterranean Sea, ARCA (Portopalo di Capo Passero, Italy) and ORCA (Toulon, France), optimized respectively for neutrinos in the energy range of 1 TeV-100 PeV and 10 GeV-10 TeV. The construction of both detectors is well under way, with 27 and 18 Detection Units active in ARCA and ORCA respectively. In this talk, I will report the main physics results obtained with ARCA and ORCA, in their partial configurations, and an overview of the expected performances of the full detectors will be given. The KM3NeT alert system will be discussed, in the context of a multi-messenger approach. The main technological efforts carried on in the last years will be described, which paved the way to the current mass construction phase.

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Session Classification: Neutrinos in the multi-messenger era

Track Classification: Neutrinos (NU): Neutrinos in the multi-messenger era