Contribution ID: **21** Type: **Invited Talk**

Neutrino astrophysics in the era of KM3NeT

Thanks to their ability to escape dense astrophysical environments and their straight-line propagation over cosmological distances, neutrinos provide a unique probe of the high-energy Universe. Neutrino astronomy, initiated by pioneering experiments such as ANTARES and IceCube, is now evolving rapidly, with a new generation of detectors coming into play.
Among these, KM3NeT is expected to play an important role. With its two detectors—ARCA, targeting high-energy neutrinos, and ORCA, focused on the lower-energy regime—KM3NeT combines wide energy coverage with excellent angular resolution. These capabilities are crucial for addressing key questions in astrophysics, including the identification of cosmic accelerators and the study of transient phenomena.
This contribution will present an overview of the current status and future prospects of neutrino astrophysics, and discuss the role of KM3NeT in upcoming observations. Particular emphasis will be placed on the growing synergies between neutrino telescopes and other observational facilities operating across the electromagnetic spectrum and beyond, which together enable a more comprehensive view of the most energetic processes in the Universe.

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