

KM3NeT: Neutrino telescoping in the abyss

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The KM3NeT Collaboration is incrementally building two underwater Cherenkov neutrino telescopes in the Mediterranean Sea. Both telescopes share the same technology for neutrino detection, by studying Cherenkov radiation from secondary charged particles produced in neutrino interactions. Photomultipliers are a common choice for the detection of Cherenkov radiation, but the hostile underwater environment, affected by sea currents and bioluminescence demands innovative solutions in KM3NeT.

The KM3NeT design is modular and allows for data taking with the telescope still in the construction stage. Early technical and scientific results are enticing. In particular, KM3NeT recently discovered a neutrino of unprecedented energy from outer space.

The speaker will cover KM3NeT telescope design and operation, as well as give a brief overview of the latest results.

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