

Atmospheric neutrinos with the first detection units of KM3NeT-ARCA

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The KM3NeT Collaboration is constructing two deep-sea Cherenkov detectors in the Mediterranean Sea, aiming at neutrino oscillation measurements with the ORCA array, while the ARCA array is aimed at neutrino astronomy in the TeV range. In March 2021, a major step will be taken in the construction of ARCA, bringing the total number of detection lines from one to six. If successful, ARCA will be similar to ANTARES in volume.

In this contribution, we will present the very first data from the new KM3NeT-ARCA configuration. The commissioning and calibration efforts will be presented. The performance will be demonstrated using atmospheric muons and the first atmospheric neutrinos will be shown. The results will be put in context of the ongoing production plans.

Keywords

Atmospheric neutrinos, KM3NeT-ARCA, underwater neutrino telescope, atmospheric muons, neutrino astronomy

Collaboration

KM3NeT

other Collaboration

Subcategory

Experimental Results

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