



Poster session 2 – Tuesday 5 July

P2.015 First results of the first KM3NeT detection line

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The KM3NeT detector is a new generation Cherenkov neutrino telescope being installed in two Mediterranean deep-sea sites. Its infrastructure will comprise several thousand identical multi-PMT digital optical modules (DOMs) arranged in three-dimensional spatial arrays.

The first detection line of KM3NeT was deployed in December 2015 at the KM3NeT1 site, off the shore of Sicily (Italy). This line is the first of 230 KM3NeT-ARCA strings aiming at the detection of high-energy neutrino sources. Its total height is about 700 m and it supports 18 DOMs equally spaced by 36 m. All 558 PMTs housed in the DOMs are functional.

First results of the first detection line will be presented, including in-situ calibration and validation of the nanosecond timing capabilities, analysis of data from optical flashers, and the reconstruction of the first atmospheric muons. The results highlight the excellent photon detection capabilities of the KM3NeT multi-PMT technology and signify an important step towards the completion of the full KM3NeT detector.