

On April 16, the first optical module of KM3NeT has been deployed at a depth of 2375 metres, 40 kilometres off the coast of Toulon, France. This marks the start of the first phase of the construction of the KM3NeT research infrastructure in the Mediterranean Sea.

**About KM3NeT:**

KM3NeT is a large international effort with a challenging and compelling objective: The discovery of neutrino sources in the Universe. Neutrinos are sub-atomic particles, well known for their reluctance to be detected. A discovery of a neutrino source provides for identification and understanding of astrophysical particle accelerators. The KM3NeT research infrastructure will be shared by a multitude of other sciences, making continuous and long-term measurements in the area of oceanography, geophysics, and marine biological sciences possible. The KM3NeT collaboration has about 200 members from 40 European institutes.

On April 16, the first optical module of KM3NeT has been deployed at a depth of 2375 metres, 40 kilometres off the coast of Toulon, France. The optical module constitutes the camera of the neutrino telescope. It consists of a 17" glass sphere, equipped with 31 ultra-fast sensors that can detect light at the quantum level, electronics for the digitisation of the signals and fibre optics to transmit the data to shore. The KM3NeT research infrastructure will consist of about 12,000 such modules distributed in the Mediterranean Sea off the coasts of France, Italy and Greece, and covering several cubic kilometres of deep-sea water. A second module equipped with five sensors was deployed at the same time for monitoring.

A preliminary analysis of the available data revealed an unambiguous signal of muons produced in the atmosphere above the site. Ultimately, muons that are produced by interactions of cosmic neutrinos will be detected with the completed infrastructure.

**More information:**

KM3NeT web page: <http://www.km3net.org/>

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**Figure 1:** Photograph of the first KM3NeT optical module, just before deployment 40 kilometres off the coast of Toulon, France.