Eyes of KM3NeT

> The new generation neutrino telescope

KM3NeT is a neutrino telescope to be built at the bottom of the Mediterranean Sea. With many thousands of optical sensors – the eyes of the telescope – it will search for neutrinos from distant astrophysical sources like active galactic nuclei, gamma ray bursts or supernovae and will be a powerful tool in the search for dark matter in the Universe.

>The eyes of KM3NeT

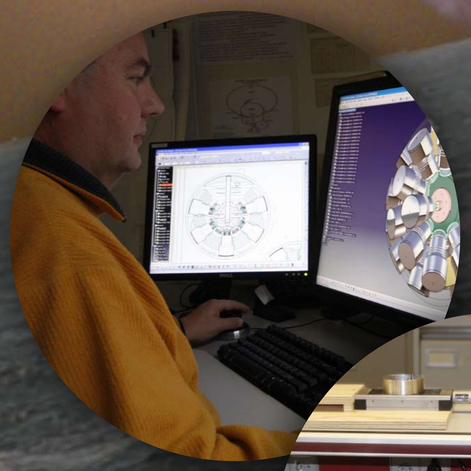
With an array of several thousand of optical sensors KM3NeT will detect the faint Cherenkov light in the deep sea from neutrino-induced muons originating from interactions of the neutrino with the Earth or the sea water. The optical sensors consist of glass spheres with many small photo multiplication tubes (PMTs) inside. In this way they resemble the eyes of a fly.

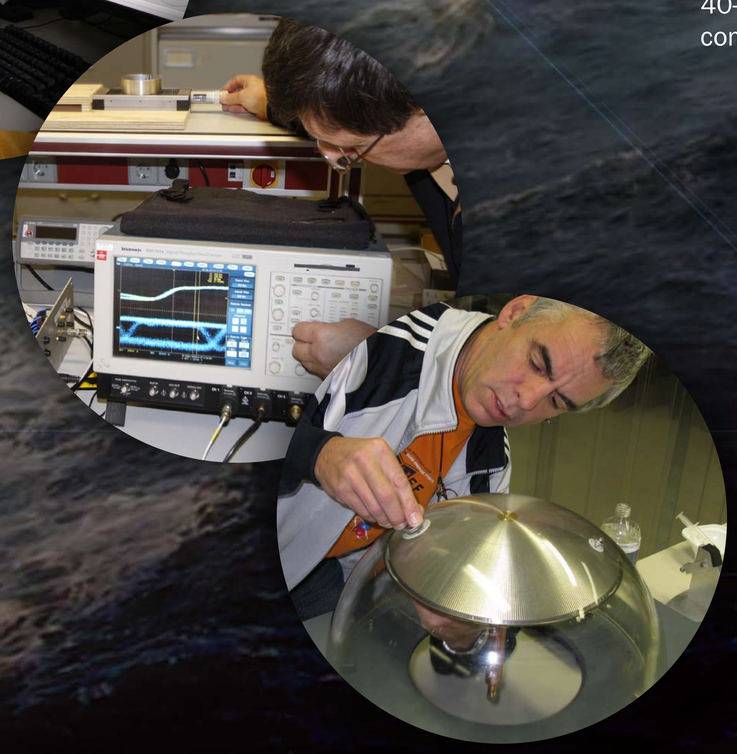
>The optic nerves of KM3NeT

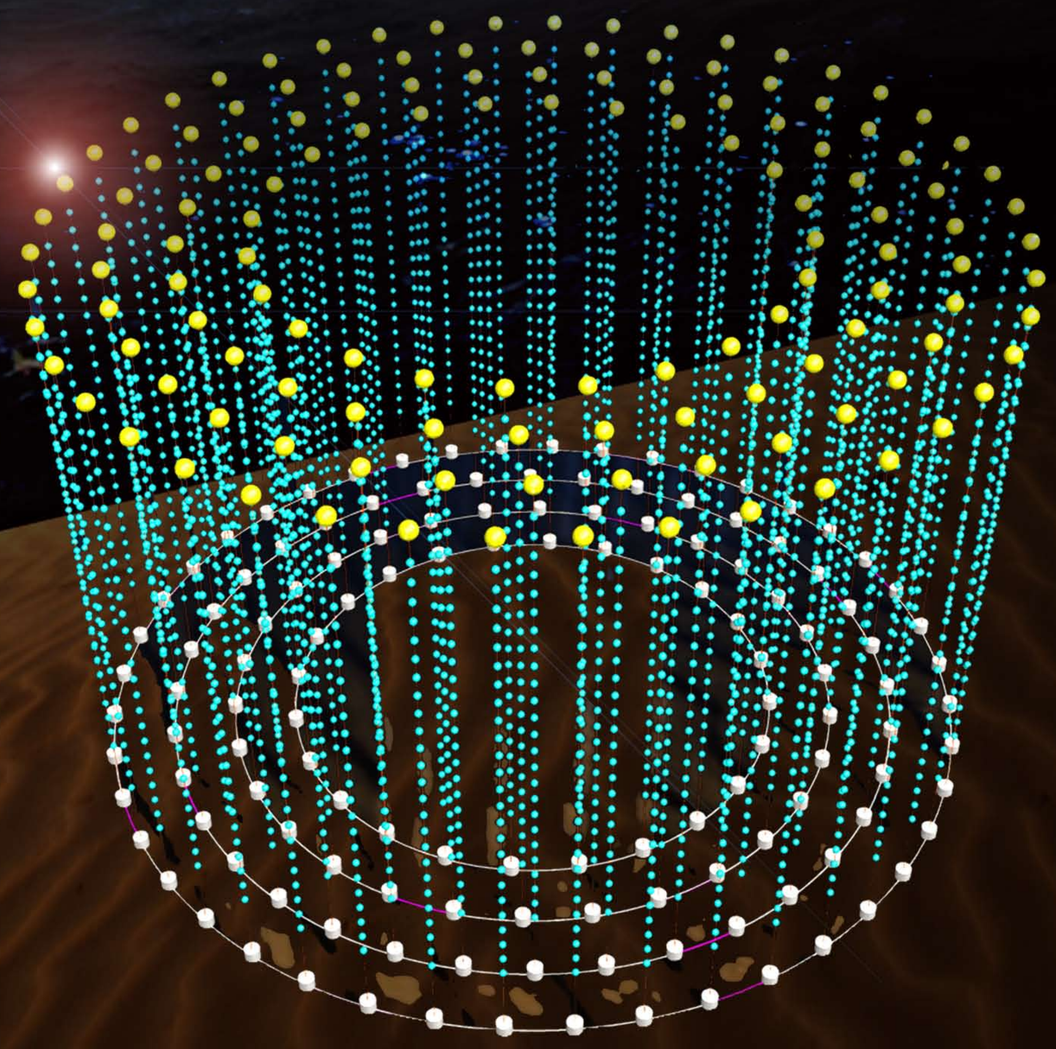
The signals from the optical sensors will be transported to the shore using optical fibers. Over distances in the order of 40-100 km a timing of less than 10 ps has to be achieved. On shore the signals will be filtered from background using a computer farm.

>Cabled observatory

The KM3NeT facility will also house instrumentation from other sciences like marine biology and geophysics for long term and on-line monitoring of the deep sea environment and the sea bottom at depth of several kilometres.







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