



Contribution ID : 774

Type : **Oral presentation**

Status and physics goals of KM3NeT

Saturday, 5 July 2014 09:48 (18)

The KM3NeT Collaboration has started the first phase of construction of a next generation high-energy neutrino telescope in the Mediterranean Sea. With several cubic kilometres instrumented with thousands optical sensors, KM3NeT will be, when completed, the largest and most sensitive high-energy neutrino detector. Thanks to its location in the Northern hemisphere and to its large instrumented volume KM3NeT will be the optimal instrument to search for neutrinos from the Southern sky and in particular from the Galactic plane, thus making it complementary to IceCube.

The full KM3NeT detector will be a distributed, networked infrastructure comprising several detector blocks with an array of optical sensors. Each block will contain about one hundred detection units, i.e. vertical structures with a height of about 700 m hosting the optical sensors. In Italy, off the coast of Capo Passero, and in France, off the coast of Toulon, the construction of the KM3NeT-It and KM3NeT-Fr infrastructures respectively is in progress.

The status of construction of the KM3NeT detector will be presented as well as its capability to discover neutrino sources.

Summary

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Session Classification : Astroparticle Physics and Cosmology

Track Classification : Astroparticle Physics and Cosmology