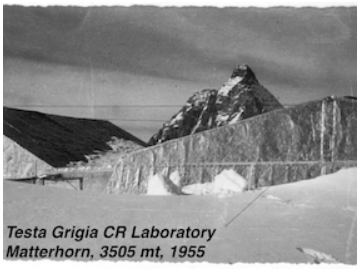

ID contributo: **127** Tipo: **oral**

High-energy neutrino astronomy with KM3NeT-ARCA

mercoledì 7 settembre 2016 11:00 (15 minuti)

KM3NeT is a neutrino observatory being constructed in the deep sea of the Mediterranean. Located on the Northern hemisphere and with a much better angular resolution and improved sensitivity the Km3net-Arca telescope will be the optimal imstrument to follow up the search for the sources of the high-energy neutrino flux reported by the IceCube observatory at the South pole. The KM3NeT collaboration aims at building a distributed research infrastructure in the depths of the Mediterranean Sea hosting a km3 neutrino telescope for high energy neutrino astronomy, ARCA, off-shore Capo Passero in Italy and a megaton scale telescope for the determination of the neutrino mass hierarchy with passing through atmospheric neutrinos (ORCA) off-shore Toulon in France. The intrinsically modular nature of the detector will allow for a staged implementation with increasing size. KM3NeT phase 1, with an instrumented volume of about 0.1 km3 , is under construction. The latitude of KM3NeT-ARCA will allow for a wide coverage of the observable sky including the region of the galactic centre. Due to the characteristics of sea water the direction of neutrinos will be measured with excellent angular resolution also for cascade events. The expected KM3NeT-ARCA sensitivity will allow to detect the IceCube flux in about one year, providing new data on its origin, energy spectrum and flavour composition, and in five years could give indications at 3-sigma level on some galactic point-like sources.

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Classifica Sessioni: Parallel