VLVnT - 2015: Very Large Volume Neutrino Telescope



Contribution ID: 101 Type: not specified

Moon shadow observation with ANTARES and KM3NeT neutrino telescope

Monday 14 September 2015 15:20 (20 minutes)

The ANTARES detector is the largest neutrino telescope currently in operation in the North Hemisphere, while KM3NeT

is a future new generation neutrino telescope with a volume of a cubic-kilometres that will be located at the bottom of the Mediterranean Sea.

The point-like neutrino search is one of the main goal of the neutrino telescopes, therefore the evaluation of the pointing performance is crucial.

This measure can be performed exploiting the absorption of cosmic rays by the Moon that lead to a deficit in the atmospheric muon flux, the so-called Moon shadow effect.

The results of the ANTARES analysis (2007-2012) and KM3NeT simulation will be presented. The six years ANTARES analysis presents a 3.1σ significance of the Moon shadowing, while the KM3NeT simulation shows that a 12.5σ significance can be reached in one year.

Author: SANGUINETI, Matteo (INFN Genova - Università di Genova)Presenter: SANGUINETI, Matteo (INFN Genova - Università di Genova)

Session Classification: Parallel Session F