Contribution ID: **701** Type: **Talk**

KM3NeT/ORCA: status and perspectives for neutrino oscillation and mass hierarchy measurements

Friday 31 July 2020 08:15 (15 minutes)

A next-generation neutrino telescope, the Kilometer Cube Neutrino Telescope (KM3NeT), is currently under deployment in the Mediterranean Sea. Its low energy configuration ORCA (Oscillations Research with Cosmics in the Abyss) is optimised for the detection of atmospheric neutrinos with energies above ~1 GeV. The main research target of the ORCA detector is the measurement of the neutrino mass ordering and atmospheric neutrino oscillation parameters, while the detector is also sensitive to a wide variety of other physics topics, such as dark matter, non-standard interactions and sterile neutrinos.

The presentation will provide an overview of the ORCA detector and introduce its research programme, alongside early analyses of data collected with the array in its current, 6-lines configuration.

I read the instructions

Secondary track (number)

Presenter: KALACZYNSKI, Piotr (NCBJ Warsaw)

Session Classification: Neutrino Physics

Track Classification: 02. Neutrino Physics