



WESTFÄLISCHE
WILHELMS-UNIVERSITÄT
MÜNSTER



FACHBEREICH
PHYSIK

›Allgemeines Physikalisches Kolloquium

> Donnerstag, 31.01.2019 um 16 Uhr c.t.

Prof. Dr. Dorothea Samtleben
University Leiden



Hunting the Invisible

Neutrinos are fundamental particles, which are abundant, but notoriously hard to detect. They are still highly sought after as measurements of their flavor oscillations are a promising path to advance our understanding of elementary particles and interactions and to possibly discover new physics.

Also very recently the neutrinos prominently entered the stage in multi-messenger astronomy with the first identification of a cosmic high energy neutrino source, opening a new window to explore the distant Universe.

The KM₃NeT collaboration is currently instrumenting a water volume of cubic kilometer size on the bottom of the Mediterranean Sea to enable highly sensitive neutrino observations. This neutrino telescope will provide access to cosmic high energy neutrinos as well as to the lower energy neutrinos created in interactions of cosmic rays with the atmosphere, which allow the measurement of neutrino oscillations at unprecedented precision. I will present the status of the detector, data from the first detection units in the Mediterranean Sea and an overview on the rich science potential of KM₃NeT.

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Kolloquiums-Kaffee
ab 16 Uhr vor dem Hörsaal

Wilhelm-Klemm-Straße 10
Institutsgruppe 1 Hörsaal HS 2