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Results from the ANTARES neutrino Telescope and perspectives for KM3NeT

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ANTARES, the deep-underwater Cherenkov neutrino telescope in the Northern hemisphere, has been taking data continuously since 2007. Its primary goal is the search for astrophysical neutrinos in the TeV-PeV range. Thanks to its excellent angular resolution, ANTARES has performed dedicated searches for promising neutrino source candidates and several interesting regions like the Galactic Plane or the Fermi Bubbles have been explored, using for the first time its sample of cascade events. The results on the search for Dark Matter with the ANTARES detector, looking for neutrinos from the Centre of Galaxy, from the Sun and from the Centre of the Earth will be presented. ANTARES is actively developing a manifold multi-messenger program: latest experimental results from searches of neutrinos from Gamma Ray Burst sources or neutrinos correlated with the recently discovered gravitational wave signals will be reported. So far no significant correlation with external observations has been detected. The high quality of the data provided by ANTARES and the competitiveness of the results achieved, despite the modest size of the detector if compared to IceCube, demonstrate the tremendous potential of the new, much larger array, KM3NeT. The status and the perspectives of the KM3NeT project for neutrino astronomy will be reported.

Parallel Session

Dark Matter, Astroparticle Physics

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