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Dark Matter Searches with ANTARES Neutrino Telescope

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The ANTARES Collaboration is operating the largest water Cherenkov neutrino telescope in the Northern hemisphere, installed in the Mediterranean Sea. One of the objectives of ANTARES is the search for neutrinos produced in self-annihilation of Dark Matter particles. The results on the search for Dark Matter annihilations in the Sun with the data recorded between 2007 and 2012 are presented. The obtained competitive limits on the WIMP-proton cross-section are compared to the ones of other indirect and direct detection experiments as well as to predictions of SUSY models. The possibility of testing secluded dark matter models with this search is also addressed. Results of ANTARES on Dark Matter searches towards the Galactic Centre are also presented, leading to competitive limits on the annihilation cross-sections for high mass WIMPs. Finally, the work on indirect searches towards dwarf galaxies and the centre of the Earth will also be presented.

Summary

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