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Search for heavy secluded dark matter with ANTARES

Dark matter searches have found until now no evidence for a WIMP candidate at the GeV-TeV scale. Heavy sectors of physics beyond the Standard Model provide dark matter candidates at and above 10-100 TeV. Such heavy dark matter can be indirectly searched for in secluded scenarios, which naturally evade the unitarity bound on the dark matter mass, and at the same time allow to reliably compute the annihilation spectra of relevance for experiments. These perspectives open a yet unexplored search territory accessible to neutrino telescopes such as ANTARES and KM3NeT. Promising dark matter sources such as the Galactic Centre are in good visibility for these telescopes, that perform a search for high-energy neutrinos produced in dark matter pair-annihilations. Results of a search for heavy secluded dark matter with ANTARES are presented.

Mini-abstract

ANTARES presents their limits on the annihilation of heavy secluded dark matter.

Experiment/Collaboration

ANTARES

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