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KM3NeT/ARCA sensitivity and discovery potential for neutrino point-like sources

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KM3NeT is a large research infrastructure with a network of deep-sea neutrino telescopes in the abyss of the Mediterranean Sea. Of these, the KM3NeT/ARCA detector, installed in the KM3NeT-It node of the network, is optimised for studying high-energy neutrinos of cosmic origin. Thanks to its geographical location in the Northern hemisphere, KM3NeT/ARCA can observe most of the Galactic Plane, including the Galactic Centre. Under the hypothesis of hadronic mechanisms acting inside transparent sources, models for galactic neutrino sources are well constrained by TeV gamma-ray observations. Sensitivities to galactic sources such as the supernova remnant RXJ1713.7-3946 and the pulsar wind nebula Vela X are presented as well as sensitivities to a generic point source with an E^{-2} spectrum, which represents an approximation for the spectrum of extragalactic candidate neutrino sources. Analysis methods and results are discussed both for the track and cascade channels.

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