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Looking at the Central Molecular Zone and Cygnus region with the KM3NeT/ARCA telescope

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In this contribution, a search for neutrino emission from the Central Molecular Zone (CMZ) and the Cygnus region is presented exploiting KM3NeT/ARCA capabilities.

The CMZ extends for few hundred parsecs around the Galactic centre, containing the massive molecular clouds Sgr A, Sgr B, and Sgr C.

On the other hand, the Cygnus region is a massive star-forming region of few hundred parsecs in the constellation of Cygnus. It host a high gas density too and a rich stellar population. The high energy emission from these regions is expected to be dominated by the interactions of cosmic-rays with the molecular gas, which translate into granted gamma-rays and neutrinos production.

Here we explored the sensitivity level of the actual KM3NeT/ARCA geometry and we set upper limits for both regions. Moreover, we also explored the case of the full KM3NeT/ARCA detector geometry.

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