

## SciNeGHE 2016 High-energy gamma-ray experiments at the dawn of gravitational wave astronomy



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### SEARCH FOR GAMMA-RAY SIGNALS FROM DWARF SPHEROIDAL GALAXIES WITH THE CHERENKOV TELESCOPE ARRAY

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Cosmological observations indicate that approximately 27% of the energy density of the universe is in the form of dark matter which is non-baryonic. The nature of dark matter is an open question in modern physics. A well motivated candidate constituent is a weakly interacting massive particle (WIMP) with mass in the range between  $O(10)\text{GeV}$  and  $O(100)\text{TeV}$ . The annihilation radiation from such particles can be searched for with imaging atmospheric Cherenkov telescopes (IACTs) such as the planned Cherenkov Telescope Array. Dwarf spheroidal galaxies (dSphs) of the Milky Way are among the most promising targets since these are dynamically dominated by dark matter and have no intrinsic (astrophysical) gamma-ray emission. In this contribution we will review the status of such searches and give prospects for future observations with the Cherenkov Telescope Array.

**Primary author:** RODRIGUEZ FERNANDEZ, Gonzalo (ROMA2)

**Co-author:** MORSELLI, Aldo (ROMA2)

**Presenter:** RODRIGUEZ FERNANDEZ, Gonzalo (ROMA2)

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