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CTA and SWGO: the future in gamma-ray searches looking for dark matter particles

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The search for dark matter particles remains one of the most intriguing aims of several experiments nowadays. In this talk, we will make a brief review of the dark matter problem, which leads to the main dark matter particle candidates, the weakly interacting massive particles, or simply WIMPs, then we will review the main ways to look for these particles. In the following, we will focus on indirect dark matter particle searches and explore the future gamma-ray observatories, the Cherenkov Telescope Array (CTA), and the Southern Wide-field Gamma-ray Observatory (SWGO). In order to see the impact of these future experiments, we will address the so-called secluded models, which are alternative scenarios to the standard WIMPs, exploring two distinct targets, the galactic center, and the Sun.

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