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Invited: Ten years of Indirect Dark Matter searches at TeV scales with HAWC

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While there exists overwhelming evidence pointing to the existence of dark matter (DM) as one of the components of the Universe, “what is the nature of DM?”, remains as one of the unsolved puzzles of modern physics. Several hypotheses and theories propose a new kind of particle to explain DM. Among them, candidates as Weekly Interactive Massive Particles (WIMPs), and ultra-light DM as Axion-like Particles (ALPs) or Dark Photons are the best candidates to explain totally or partially the DM under the context of the Lambda-CDM cosmological model. Footprints of these hypothetical particles should be found at the TeV gamma-ray scales where observatories such as HAWC operate. In this talk, we will review the results of the different indirect searches of DM using HAWC observations of extragalactic and galactic sources and the constraints on the parameters of WIMPs and ALPs.

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