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Indirect Dark Matter searches with the HAWC Observatory.

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The High Altitude Water Cherenkov (HAWC) observatory is a wide-field-of-view (2sr) and high duty cycle (>95%) gamma-ray detector array, which is sensitive to gamma rays from 500 GeV - 100 TeV. HAWC operates at an altitude of 4100 meters in the state of Puebla, Mexico, since HAWC observes 2/3 of the sky 24 hours a day, it is a well-suited instrument to perform indirect dark matter searches by detecting high energy photons resulting from annihilation or decay of dark matter particles. For such searches, we have considered dwarf spheroidal galaxies, the Milky Way halo, and the M31 galaxy. Besides the traditional regions, we have also searched in some other regions as dwarf irregulars galaxies. Since HAWC has not seen statistically significant excess from these sources, we present annihilation and decay limits for dark matter masses above 1 TeV.

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