

Searches for Dark Matter and Primordial Black Holes with the HAWC Gamma-Ray Observatory

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The High Altitude Water Cherenkov (HAWC) gamma-ray observatory is a continuously operated, wide field-of-view (FOV) observatory sensitive to 100 GeV - 100 TeV gamma rays. HAWC has been making observations since summer 2012 and officially commenced data-taking operations with the full detector in March 2015. With an instantaneous FOV of 2 steradians, HAWC observes 2/3 of the sky in 24 hours and can be used to search for astrophysical signatures of dark matter (DM) and primordial black holes (PBHs). In particular, HAWC should be the most sensitive experiment for signals coming from annihilation or decay of DM with masses greater than 10-100 TeV.

Summary

For the HAWC Collaboration.

I will present HAWC's latest results on searches for dark matter signals from dwarf spheroidal galaxies and galaxy clusters, and for evaporating Primordial Black Holes.

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