

Abstract Submitted
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The High Altitude Water Cherenkov Instrument JOHN PRETZ,
Los Alamos National Lab, HAWC COLLABORATION — The High Altitude Water Cherenkov (HAWC) experiment, under construction at Sierra Negra, Mexico, consists of a 22500 square meter area of water tanks instrumented with light-sensitive photo-multiplier tubes. The experiment detects energetic secondary particles reaching the ground when a high-energy cosmic ray or gamma ray interacts in the atmosphere above the instrument. By timing the arrival of particles on the ground, the direction of the original primary particle may be resolved with an error of between 1.0 and 0.1 degrees. Sensitive to gamma ray primaries between 50 GeV and 100 TeV, the experiment will observe Galactic sources as well as diffuse emission from the Galactic plane. The wide field of view enables long term monitoring of extra-Galactic sources and searches for flaring active galaxies and gamma ray bursts. I will describe the instrument and its anticipated sensitivity to gamma ray sources, focusing on design options to increase the effective area to gamma rays below 100 GeV.

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