

4CF12-2012-020039

Abstract for an Invited Paper
for the 4CF12 Meeting of
the American Physical Society

Status of HAWC: Unraveling the Extreme Universe at TeV Energies

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HAWC (High Altitude Water Cherenkov) observatory is a next-generation ground-based particle shower detector under construction in Mexico. The wide field of view ($\sim 2\text{sr}$) observatory will operate at nearly continuous duty cycle to achieve unparalleled sensitivity to highest energy gamma rays up to 100 TeV. HAWC's extended field of view complements the narrow field of view, TeV observations of atmospheric Cherenkov telescopes and the wide field of view, GeV observations of the Fermi and AGILE satellite-based, gamma-ray observatories. HAWC will conduct a comprehensive scientific program that includes unbiased TeV sky survey of galactic and extra-galactic particle accelerators along with the studies of transient phenomena such as flaring active galactic nuclei and gamma-ray bursts. Funding for the construction has been granted by DOE, NSF and CONACyt with phased installation of detectors to be completed by 2014. However, gamma-ray observations will be performed during construction with an increasingly more sensitive detector. By the end of 2012, HAWC's sensitivity will exceed the capabilities of existing and past wide field of view TeV observatories. In this talk, I will discuss the status of the project as well as the design sensitivity, and the scientific objectives of HAWC.