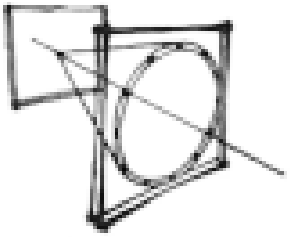

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Very high energy gamma-ray astronomy with HAWC

Thursday 8 September 2016 09:35 (25 minutes)

The High-Altitude Water Cherenkov (HAWC) observatory was completed and began full operation on March 2015, collecting more than one year of data in its full configuration. The detector consists of an array of 300 water tanks, each containing 200 tons of purified water and instrumented with 4 PMTs. Located at an elevation of 4100 m a.s.l. near the Sierra Negra volcano in central Mexico, HAWC observes gamma rays in the 0.1-100 TeV range and has a sensitivity to TeV-scale gamma-ray sources an order of magnitude better than previous air-shower arrays. Its wide field-of-view and high duty cycle make HAWC an ideal instrument for surveying the very high energy gamma-ray sky. HAWC is currently undergoing an upgrade to improve the sensitivity at multi-TeV energies. It consists on the addition of an outrigger array of smaller tanks surrounding the main array. In this contribution, we will present the performance of the instrument, the latest results obtained with the full array, the status of the outrigger array and the expected performance of the full detector after the upgrade.

Registered

Yes

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