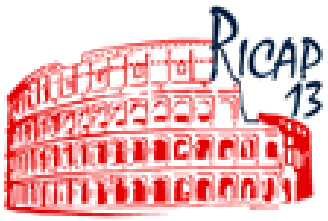

Contribution ID: **68** Type: **not specified**

TeV Astrophysics with the HAWC Gamma-Ray Observatory

Friday, 24 May 2013 09:40 (20 minutes)

The High Altitude Water Cherenkov (HAWC) Observatory is a wide-field gamma-ray detector sensitive to gamma rays with energies between 100 GeV and 100 TeV. Located on the volcán Sierra Negra in Puebla, Mexico at an elevation of 4100 meters above sea level, HAWC will observe ~6 sr of the sky each day. The large field-of-view and continuous operation make HAWC an ideal instrument to search the high-energy sky for transient phenomena such as gamma-ray bursts and flaring from active galaxies. In addition, the long integration times available for all sources in our field-of-view (~1200 hours/year/source), give HAWC excellent sensitivity to the highest energy photons, where one is often limited by photon statistics. With more than an order-of-magnitude greater sensitivity than the Milagro experiment HAWC will be capable of surveying ~5 sr of the sky with a sensitivity of better than 25 mCrab after five years of operation. In this talk I will discuss the design and physics potential of HAWC and give an update on recent results obtained with a small section of the complete detector known as HAWC-30.

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