

Department of Physics Colloquium

Friday, October 15, 2010 • 4:00 P.M. • 2241 Chamberlin Hall

cookies & coffee served at 3:30 p.m

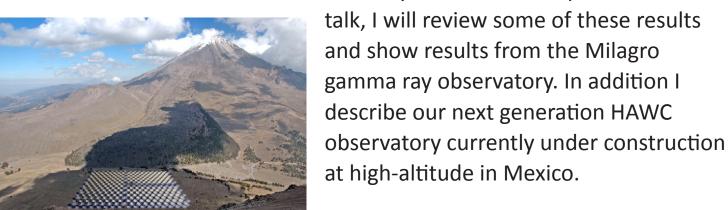
Our Changing View of the TeV Sky



Jordan Goodman

University of Maryland

The advent of ground-based atmospheric and water Cherenkov gamma-ray detectors, as well as, the Compton and Fermi satellites has revolutionized our view of the TeV sky. Twenty years ago there was only one known TeV gamma-ray source, the Crab. Today there are well over 100 detected sources - steady and variable, point-like and diffuse. We have also made great strides studying Gamma Ray Bursts, the most energetic processes in the Universe. Most recently, we have even discovered that charged TeV cosmic rays have unexpected anisotropies in their arrival directions suggesting the existence of local cosmic ray sources. The next generation detectors, CTA, HAWC and, IceCube will undoubtedly give us a better understanding of these exciting phenomena and almost certainly reveal more surprises. In this



The High Altitude Water Cherenkov (HAWC)
Observatory