

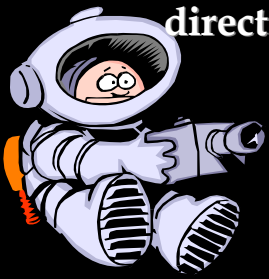


# The Physics Department Invites you to a: Seminar



## Exploring the extreme universe: astronomy and particle physics with VHE gamma-rays"

Viewed at very high energies, the universe is a place of powerful astrophysical engines driving accelerators that reach far greater energies than anything built on earth. By studying the products of these accelerators (such as cosmic rays and gamma-rays), we can not only learn a great deal about the astrophysics of these sources, but probe a variety of questions in particle physics and cosmology. A new generation of imaging atmospheric Cherenkov telescopes (IACTs), designed to detect VHE (100 GeV-10 TeV) gamma-rays, has radically altered our picture of the very high-energy gamma-ray sky. One such instrument is the recently-commissioned IACT array VERITAS, which saw first light in April 2007. I will discuss results from the first two years of the VERITAS observing program and the guidance that they offer for the next few years of the VERITAS program. The impact of (and synergy with) the recently-launched Fermi satellite, which promises to similarly revolutionize gamma-ray astronomy in the 20 MeV to 300 GeV band, will also be discussed, along with long-term directions for the field.



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