



SPEAKER: Jason Steffen (Fermilab)
TITLE: **Laser Probes of the Dark Sector**
DATE: Fri 13/01/2012 11:00
PLACE: Council Chamber

ABSTRACT

Dark matter, dark energy, and gravity are fundamental components of the standard cosmological model, and their macroscopic effects on the evolution of the universe are well documented. However, the quantum properties of these fields remain largely unknown. An ongoing suite of laser experiments at Fermilab have conducted searches for axion-like dark matter, tested particle models of dark energy, and plans to test certain predictions of black hole thermodynamics---namely the holographic principle. I will present the results from the GammeV search for milli-eV axion-like particles and will discuss in detail the recently completed CHASE search for chameleon dark energy.