



# PHYSICS COLLOQUIUM

## Distinguished Alumni Award Winner



### Mark Devlin

University of Pennsylvania

## Where Did Half the Starlight in the Universe Go?

**W**e believe that approximately half of all the light from stars is absorbed and reprocessed by dust. The resulting emission is grey body with a temperature near 30 Kelvin. The COBE satellite made the first measurements of the resulting Far Infrared Background (FIRB), but since that time, we have been unable to resolve the background into individual galaxies. The Balloon-borne Large Aperture Submillimeter Telescope (BLAST) was designed to do this job. Its three bands at 250, 350, and 500 microns span the peak in emission for galaxies at  $z=1$ . I will discuss the BLAST experiment and present results from our measurements of resolved and unresolved galaxies. I will also discuss the implications for star formation in our own galaxy and how dust is changing the way we look at current and future searches for primordial gravity waves with the Cosmic Microwave Background.

4:00 pm • Friday May 8, 2015 • 2241 Chamberlin Hall • Coffee at 3:30 pm