

# PHYSICS DEPARTMENT COLLOQUIUM

" Optical Detection of Antioxidant Molecules in Living  
Human Tissues"

BY

DR. WERNER GELLERMAN  
*University of Utah*

We explore laser-based Raman and fluorescence spectroscopy for the non-invasive detection of molecules playing an important protective role in the human body. Specifically, we detect, image, and monitor antioxidants in the human retina and in skin. The techniques are precise, specific, sensitive, and appear well suited for clinical as well as field studies. They can be applied for rapid measurements of large populations and may become important optical screening tools to assess risks for increasingly problematic diseases such as age-related blindness and skin cancers. In this talk we will discuss tissue-optical detection principles, their strengths and limitations, and the current status of applications.

THURSDAY, JANUARY 20, 2005  
REFRESHMENTS AT 3:30 PM IN 219 JFB