Prof. Mark Conradi
Washington University

"Laser-Polarized Gases and Magnetic Resonance Imaging of Lungs"

The production of He-3 gas with high nuclear spin polarization and its application to imaging of human and animal lungs will be described. The talk will address and answer: What is the physics behind laser-driven nuclear spin polarization? Why are highly polarized spins needed for MR imaging of the air spaces of lungs? What can simple spin-density images show about lung disease? What can one learn about emphysema by measuring the diffusion of He-3 in lungs? How does one measure diffusion with magnetic resonance imaging methods? How can one measure the average dimensions of the smallest airways using polarized He-3 diffusion-MRI?

REFRESHMENTS AT 3:45 P.M.

For further information call Mark Reeves at 202-994-6279

THE GEORGE WASHINGTON UNIVERSITY
DEPARTMENT OF PHYSICS
WEB ADDRESS: http://www.gwu.edu/~physics