



The Virginia Tech Physics Department presents the following colloquium:

Prof. Carter Hall
(Department of Physics, University of MD)

*“Searching for Double Beta Decay with the
Enriched Xenon Observatory”*

Abstract:

Neutrinoless double beta decay has recently become a top priority for the global neutrino physics program. Double beta decay has may resolve the scale of the neutrino mass spectrum, and is also the only practical tool we have for understanding the particle/anti-particle nature of the neutrino. The EXO collaboration is developing sensitive searches for the double beta decay of Xenon-136. Our first experiment, EXO-200, is rapidly being constructed, and will be by far the largest double beta decay experiment ever attempted. We are also pursuing R&D to realize a system to tag the daughter barium nucleus of the decay using the techniques of single-ion spectroscopy. This would eliminate all conventional radioactive backgrounds, resulting in an ideal experiment. This colloquium will summarize the current status of our work.

Friday, January 26, 2007
2:30 P.M.
210 Robeson Hall