



SPEAKER: Karol Lang (University of Texas at Austin)

TITLE: **Neutrino Physics without Neutrinos: Recent results from the NEMO-3 experiment and plans for SuperNEMO**

DATE: Tue 16/06/2015 11:00

PLACE: TH Conference Room

ABSTRACT

The observation of neutrino oscillations has proved that neutrinos have mass. This discovery has renewed and strengthened the interest in neutrinoless double beta decay experiments which provide the only practical way to determine whether neutrinos are Majorana or Dirac particles. The recently completed NEMO-3 experiment, located in the Laboratoire Souterrain de Modane in the Frejus Tunnel, was an experiment searching for neutrinoless double beta decays using a powerful technique for detecting a two-electron final state by employing an apparatus combining tracking, calorimetry, and the time-of-flight measurements. We will present latest results from NEMO-3 and will discuss the status of SuperNEMO, the next generation experiment that will exploit the same experimental technique to extend the sensitivity of the current search.