

HIGH ENERGY PHYSICS

THE UNIVERSITY OF CHICAGO
ENRICO FERMI INSTITUTE

The Monday HEP Seminar

PRESENTS:

“Searching for neutrinoless double-beta decay with
EXO-200”



Alexis Schubert
Stanford University

Several experiments have observed neutrino flavor oscillation and have measured differences between neutrino mass eigenstates. However, we still do not know the absolute neutrino mass scale or whether the neutrino is a Majorana or Dirac particle. The observation of neutrinoless double-beta decay would reveal the neutrino to be a Majorana particle and provide information about neutrino mass. EXO-200, located near Carlsbad, New Mexico, is a liquid xenon time projection chamber used to search for neutrinoless double beta decay of xenon-136. I will describe the detector and present recent results from two years of data-taking, which constrain the neutrinoless double-beta decay half life to be greater than 1.1×10^{25} years.

Monday, April 7, 2014

4:15PM in LASR 162

If any assistance is needed, please call Aspasia Sotir-Plutis in advance at (773) 702-8113