Old Dominion University
Department of Physics

Colloquium

Tuesday, March 3, 2015

"Opening a New Chapter in Neutrino Physics"

Dr. Sam Zeller
Fermi National Accelerator Laboratory

Neutrinos are among the most abundant particles in the universe and they influence an enormous range of physics. Neutrinos allow us to search for new forces of nature, they measure the composition of the earth's crust, they tell us how the sun works, and they allow us to peer into the inner workings of a supernova explosion. Despite all that we have learned from these special particles, there remains a surprising amount of information we still do not know about neutrinos themselves. The discovery of neutrino masses and mixing over a decade ago has raised a large number of challenging questions about neutrinos. After briefly reviewing what we have learned about neutrinos so far, we will examine the open questions, explain why these questions are interesting, and discuss plans for answering them in future experiments. The coming years promise to be very exciting as we move in new directions to better understand these unique subatomic particles and their connections to the world we live in.

Presentation: OCNPS 200 @ 3:00 pm
Refreshments: OCNPS Atrium @ 2:30 pm

All interested persons are cordially invited to attend.