Old Dominion University
Department of Physics

Colloquium

Tuesday, November 8, 2016

"From particle physics to medicine: new detection methods for Positron Emission Tomography"

Olga Kochebina
CEA Saclay, France

Abstract: New detection methods for Positron Emission Tomography (PET) aim to improve the clinical image quality and decrease injected doses. The PET is a powerful molecular imaging method that plays an important role for diagnosis and investigation in neurological disorders. Brain PET is especially useful for investigating the molecular dysfunctions associated with neurodegenerative diseases such as Alzheimer's, Parkinson's, Huntington's diseases or multiple sclerosis. It is also of interest in oncology for the detection of small tumors and small metastases. For such studies it is important to improve detection efficiency, spatial resolution and time resolution simultaneously.

Current developments for CaLIPSO (French acronym for Liquid Ionization Calorimeter, Scintillation Position Organometallic) PET scanner will be presented. The first simulation results illustrating the potential of such imager will also be shown.

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

All interested persons are cordially invited to attend.