

Physical Sciences & Engineering Seminar

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“The translation of science to applications at a DOE laboratory”

Hosts: Peter Littlewood & Mark Peters

**Thursday, March 19, 2015 – 10:00 a.m.
Bldg. 223, Room B-002**

The DOE national laboratory system fosters excellent science and technology, provides infrastructure for national user facilities, and provides a national scientific capability that can be applied to a variety of technical challenges. R&D at a national lab spans the gamut from basic to applied, often with interesting results that translate underlying knowledge from one area of research into another. In this talk, I will describe three examples of how this translation occurs. I will start with my roots - nuclear physics - and expand from there to a description of how nuclear physicists use the Spallation Neutron Source to explore the neutron electric dipole moment. I will also describe the applied nuclear science world of isotope production and how that work enables cutting edge nuclear physics R&D. My second example concerns the relationship between energy research and climate change. I will conclude with a third example concerning entanglement and the role of materials in quantum computing.