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## WEEKLY CALENDAR

March 9, 2009

### DEPARTMENT COLLOQUIUM

**"RF Superconductivity for particle accelerators:  
from materials science to high energy beams"**

3:40 PM, March 12, 2009  
109 Nicholson Hall

**Isidoro E. Campisi**  
Spallation Neutron Source,  
Oak Ridge National Laboratory

**Host: William Hamilton**

• *Refreshments served at 3:15 PM in 201 Nicholson Hall* •

Superconductors were discovered almost 100 years ago and applied for the first time as RF components for a particle accelerator a little over 30 years ago at Stanford. In the last thirty years many more machines based on the technology of Niobium have been built for applications ranging from high energy physics to free electron lasers, from nuclear physics to neutron scattering.

The talk will discuss the physics, technology and materials science issues of superconductors used for RF applications and will give an overview of the main particle accelerators built or planned which are based on this blooming technology.

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#### Publication:

"Synthesis and Magnetic and Charge-Transport Properties of the Correlated 4d Post-Perovskite  $\text{CaRhO}_3$ ," Kazunari Yamaura, Yuichi Shirako, Hiroshi Kojitani, Masao Arai, **David P. Young**, Masaki Akaogi, Mamoru Nakashima, Tetsuhiro Katsumata, Yoshiyuki Inaguma, and Eiji Takayama-Muromachi, *Journal of the American Chemical Society* 131, 2722-2726 (2009).