

APR13-2013-020012

Abstract for an Invited Paper  
for the APR13 Meeting of  
the American Physical Society

**W.K.H. Panofsky Prize Talk: The Search for Weakly Interacting Massive Particle Dark Matter:  
Science Motivation and CDMS strategy**

BERNARD SADOULET, University of California at Berkeley

For the last 25 years, Weakly Interacting Massive Particles (WIMPs) have remained one of the favored candidates to explain the ubiquitous dark matter in the universe. We will review the generic aspects of this class of models, and describe the complementarity between three observational approaches: the direct detection of terrestrial interactions of the halo WIMPs, the search for WIMP annihilation products in the cosmos and the attempt to produce these particles at the Large Hadron Collider. After a rapid review of the current status of these three searches, we will focus on the experimental strategy pursued by the Cryogenic Dark Matter Search as one of the leading direct detection effort in the world. We will conclude with the CDMS results obtained so far, in particular for low mass dark matter particles. In an accompanying talk, Blas Cabrera will describe the basic technology that we are using and the promise of our new generation of detectors.