Abstract Submitted
for the APR14 Meeting of
The American Physical Society

Two Years of SuperCDMS at Soudan BRADFORD WELLIVER, Univ of Florida - Gainesville, SUPERCDMS COLLABORATION — There is much cosmological evidence and theoretical motivation for particle dark matter. One such candidate is so-called Weakly Interacting Massive Particle (WIMP) dark matter. For two years of nearly continuous operation at the Soudan Underground Lab, the SuperCDMS experiment has been taking data with 15 state-of-the-art germanium interdigitated Z-sensitive Ionization and Phonon (iZIP) sensors in a direct-detection experiment. The iZIP has proven to be a versatile detector capable of discriminating against backgrounds over a wide energy range allowing searches for both low- and high-mass WIMPs. We will present a brief overview of the iZIP detector itself, illustrating its background rejection capabilities and the mass range it is capable of probing. Constraints on low-mass WIMPs from a high-voltage operation mode called CDMSlite will be presented, and the status and future plans of an on-going high-mass WIMP search will also be discussed.

Bradford Welliver
Univ of Florida - Gainesville

Date submitted: 10 Jan 2014 Electronic form version 1.4