

Abstract Submitted
for the APR07 Meeting of
The American Physical Society

The Next Generation ZIP Detector for the Cryogenic Dark Matter Search MATT PYLE, Stanford University, SUPERCDMS COLLABORATION — The ‘ZIP’ detector (for z-position, ionization, and phonons) is used in the Cryogenic Dark Matter Search (CDMS) to detect nuclei recoiling from WIMP interactions and to discriminate nuclear recoils from various backgrounds. The experiment planned to succeed CDMS, known as SuperCDMS, proposes to improve upon the final CDMS sensitivity by at least an order of magnitude. To achieve this improvement, the design for the ZIP detector must be upgraded. In this talk we introduce the next generation of the ZIP detector with decreased surface to volume ratio, hydrogen passivated electrodes, and increased phonon sensor coverage due to novel Al fin geometry changes and discuss how these improvements will enable us to meet the proposed SuperCDMS sensitivity. This talk will be the last in a sequence of four from CDMS.

Matt Pyle
Stanford University

Date submitted: 16 Jan 2007

Electronic form version 1.4