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Dark Matter Searches with Germanium Detectors with sub-keV Sensitivities

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Experiments with sub-keV sensitivities open a window to search for WIMPs at the mass range of less than 10 GeV and for axions through resonant absorption. We will present data taken with a 500-g Point Contact Germanium detector at the Kuo-Sheng Neutrino Laboratory in 2009-2010, which improve over previous sensitivities [1]. A dedicated experiment is now under preparation at the new China Jin-Ping Underground Laboratory which has over 2500 m of rock overburden and has horizontal drive-in access [2]. Data taking is scheduled by Fall 2010. The status of construction of the laboratory and the experiment will be presented. Future plans will be discussed.

Reference:

1. S.T. Lin et al., Phys. Rev. D 79, 061101 (R) (2009).

2. D. Normile, Science 324, 1246 (2009).

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