

Abstract Submitted
for the DNP11 Meeting of
The American Physical Society

Dark Matter Detection with DM-Ice BENJAMIN BROERMAN, University of Wisconsin-Madison, DM-ICE COLLABORATION — There is strong evidence for the existence of dark matter, theoretically favored to be a weakly interacting and gravitationally influential form of non-baryonic matter. The Λ CDM model delineates 23% of the mass-energy of the Universe to be dark matter, 73% dark energy, and the remaining 4% baryonic matter. However, conclusive evidence as to the direct detection of dark matter has yet to be produced. In December 2010, a new project, named DM-Ice, deployed two prototype NaI detectors in the South Pole ice, testing the feasibility for a future, larger-scale direct detection experiment. The goal is to search for the annual modulation signal expected from interactions between the target nuclei and the weakly interacting massive particle (WIMP), a candidate dark matter particle. I will report on my contributions to data readout and analysis, as well as preparations for the future experiment.

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Date submitted: 22 Jun 2011

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