

Stability Analysis of DM-Ice17

Tuesday, 5 May 2015 15:00 (15 minutes)

DM-Ice17, a 17 kg sodium iodide prototype detector for the proposed DM-Ice experiment, was deployed in the Antarctic Ice at the geographic South Pole in December 2010, and has been in operation since January 2011. I will present a stability analysis of three years of data, with a focus on sources of noise and time-dependent effects that could mimic or obfuscate a dark matter modulation. Due to the small mass of the detector, the analysis does not significantly probe dark matter regions of interest but does provide further evidence that the Antarctic ice provides an ideal location for dark matter annual modulation searches.

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