

DAMIC at SNOLAB: toward DAMIC100

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DAMIC is a novel dark matter experiment that has unique sensitivity to WIMPs with masses below 10 GeV. We summarize the experience gained from previous runs, including a new 5 g detector running at SNOLAB since December 2012. These have demonstrated the outstanding energy response, energy threshold and background characterization of CCD technology, which motivate the construction of a larger CCD-based dark matter experiment.

DAMIC100 will consist of 20 CCDs (100 g of Si) and is scheduled to be deployed in SNOLAB in the Spring of 2014. This detector is intended to have the best detection sensitivity for WIMPs with masses below 10 GeV and will explore the parameter space corresponding to the recent results from CoGeNT and CDMS-Si, which may be hinting at the existence of ~ 8 GeV WIMPs. We will discuss the challenges associated with the scale-up of the experiment and its current status, as well as the prospects for the physics results after a one year run.”

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