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Dark Matter Search Results from DAMIC at SNOLAB ALEXAN-

DER PIERS, University of Washington, DAMIC COLLABORATION — The DAMIC experiment at SNOLAB uses thick, fully-depleted, scientific grade charge-coupled devices (CCDs) to search for the interactions between proposed dark matter particles in the galactic halo and the ordinary silicon atoms in the detector. DAMIC CCDs operate with an extremely low instrument noise and dark current, making them particularly sensitive to ionization signals expected from low-mass dark matter particles. For the past two years, DAMIC has collected dark-matter search data with an array of seven CCDs (40-gram target) installed in a low radiation environment in the SNOLAB underground laboratory. This talk will focus on the recent dark matter search results from DAMIC. We will present the search methodology and results from an 11 kg day exposure WIMP search, including the strictest limit on the WIMP-nucleon cross section for a silicon target for $m_{\chi} < 9 \text{ GeV c}^{-2}$. Additionally, we will discuss recent limits on light dark matter that could interact with the electrons of the silicon atoms.

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