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Dark Matter search results from DAMIC at SNOLAB

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The DAMIC experiment at SNOLAB uses thick fully-depleted scientific grade charge-coupled devices (CCDs) to search for the interactions of dark matter particles in the galactic halo with ordinary silicon atoms. Because of the low instrumental (less than $2~e^-$) noise, DAMIC CCDs are 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, 13 kg day exposure) installed in a low radiation environment in the SNOLAB underground laboratory. I will present recent results from the searches for WIMP and hidden-sector dark matter, which cover a wide range of particle masses from $\sim 1~{\rm MeVc}^{-2}$ to $\sim 10~{\rm GeVc}^{-2}$. In particular, we probe—for the first time with the same nuclear target—a large fraction of the parameter space corresponding to the event excess previously observed by the CDMS-II silicon experiment.

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