Abstract Submitted
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The DAMIC Dark Matter Experiment KARTHIK RAMANATHAN, University of Chicago, DAMIC COLLABORATION — The DAMIC (Dark Matter in CCDs) experiment uses thick scientific grade silicon charge-coupled devices (CCDs) to detect potential ionization signals from dark matter interactions. These devices feature an impressively low leakage current ($< 10^{-21}$ A cm^2) and a very low energy threshold (40 eV$_{ee}$), making them ideal low-mass dark matter detectors. In addition, their unique spatial resolution provides for effective identification and mitigation of environmental backgrounds. In this talk I will summarize recent dark matter constraints from the experiment at SNOLAB, discuss the kg-size next generation DAMIC-M detector funded for operation, and show results from "Skipper instrumented CCDs a novel readout technique that allows for counting of individual charges, with a demonstrated resolution of 0.07 e$^-$, which ushers in a new era of sensitivity to low-energy interactions.

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