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Why I'm excited about working on DAMIC-M in 10 minutes

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The DAMIC-M (Dark Matter in CCDs at Modane) is a near-future experiment that will succeed the DAMIC@SNOLAB experiment, in the search of low mass dark matter particles (<10 GeV) using scientific Charge-Coupled Devices (CCDs). It will consist of a tower of 50 of the most massive and radiopure CCDs with a total target mass of ~ 1 kg. By implementing the Skipper readout technique, which will allow for multiple non-destructive pixel charge measurements, it will achieve a single-electron energy resolution. To support this resolution, new fast and sensitive electronics are under development within the collaboration, advancing the efficiency and quality of the former acquisition system technology. Moreover, great effort is being made in material selection, detector shielding, and the mitigation of cosmogenic activation before the final installation in the low-background environment. Working on an experiment like this, going deep and trying to perfect every little detail offers a unique and amazing experience. I will present an overview of the progress toward the DAMIC-M experiment.

Summary

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