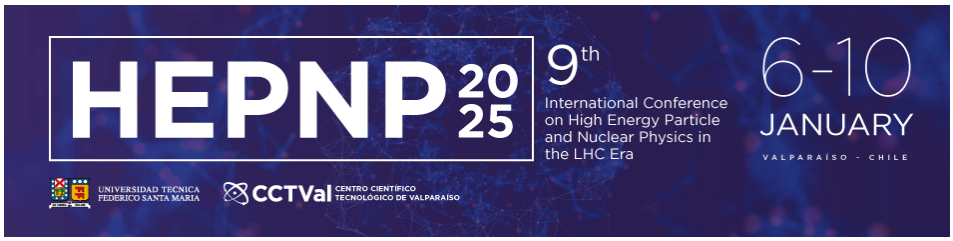

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The search for MeV-scale Dark Matter at the DAMIC-M experiment

Thursday 9 January 2025 17:30 (20 minutes)

DAMIC-M (Dark Matter in CCDs at Modane) is a leading experiment that searches for sub-GeV Dark Matter (DM) using Skipper CCDs under the French Alps at the Laboratoire Souterrain de Modane (LSM). The capability of single-electron detection, combined with an extremely low dark current, results in an energy threshold of a few eV. A first prototype phase, the Low Background Chamber (LBC), has been taking data since 2023, and world-leading limits were obtained. In this talk I will discuss the constraints on DM particles interacting with electrons for a mass range between 0.5 and 1000 MeV/c^2. I will also present results of a search for diurnal modulation in the measured single-ionization charge rate and comment on the next years perspective for DAMIC-M.

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