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A search for low-mass dark matter with a CaF2 crystal

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We developed a low threshold detector for low mass dark matter search with a CaF2 crystal and an MMC readout. The detector was assembled to make a direct metal-metal contact between an MMC sensor and a phonon-collector film on the crystal. This new absorber-sensor geometry resulted in a signal rise-time of about 100 us and a detection threshold of about a few tens of eV. We present the detector performance and the results of an above-ground measurement for the direct detection of low-mass dark matter

Submitted on behalf of a Collaboration?

No

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