

Status of CALDER: Kinetic Inductance light detectors for neutrinoless double beta decay

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The development of large area cryogenic light detectors is one of the priorities of next generation bolometric experiments searching for Majorana neutrinos. The simultaneous read-out of the heat and light signals enables particle identification, provided that the energy resolution and the light collection are sufficiently high. CALDER (Cryogenic wide-Area Light Detectors with Excellent Resolution) is developing phonon-mediated silicon light detectors using kinetic inductance detectors (KIDs), with the goal of sensing an area of $5 \times 5 \text{ cm}^2$ with an energy resolution of $\sim 20 \text{ eV RMS}$. I will present the latest results obtained with aluminum chips and with newly developed multilayer titanium-aluminum chips featuring unprecedented sensitivity.

Work based on arXiv:1801.08403 and given on behalf of the CALDER collaboration.

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