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## Searching for Sub-GeV Dark Matter with SENSEI

*Saturday, 9 July 2022 09:20 (20 minutes)*

SENSEI (Sub-Electron Noise Skipper Experimental Instrument) is pioneering the development of silicon CCDs with sub-electron charge resolution for low-threshold direct detection of dark matter.

These “skipper CCDs” are the first detectors capable of resolving single electrons in each of millions of pixels, and the low thresholds possible with this technology give SENSEI world-leading sensitivity to sub-GeV dark matter.

The SENSEI Skipper-CCDs have measured the lowest rates in silicon detectors of events containing one, two, three, or four electrons.

This results in world-leading sensitivity for a large range of dark matter masses, and significant improvement is expected with the full-scale SENSEI experiment at SNOLAB.

### In-person participation

Yes

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**Session Classification:** Dark Matter

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