



PHYSICS AND ASTRONOMY COLLOQUIUM

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“Dispatches from the sub-GeV Dark Matter Frontier”

Abstract

“Uncovering the identity of dark matter is one of the big open questions in physics today. The sub-GeV dark matter mass range has received increased interest in the last several years, owing to the lack of any unambiguous signal of the canonical WIMP in the GeV-TeV mass range. The sub-GeV mass range is relatively unexplored due to the difficulty of detecting such light dark matter with traditional techniques. However, there have been recent experimental developments that finally make sub-GeV direct detection viable. I will discuss some of the theoretical principles and strategies to explore sub-GeV dark matter candidates, as well as some current and proposed experimental techniques. I will focus predominantly on semiconductor targets, such as the new SENSEI experiment which utilizes silicon CCDs, and demonstrate the potential for exploring the eV-GeV dark matter mass range in the near future.”

Wednesday, March 10, 2021
3:30 p.m.

via Zoom: <https://uvic.zoom.us/j/81377096640>