



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 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

, 2021

3:30 pm.

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