



PPD Seminar

QUantum Enhanced Superfluid Technologies for Dark Matter and Cosmology (QUEST-DMC)

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The QUEST-DMC experiment aims to search for eV-keV scale interactions with sub-GeV dark matter candidates. To do this, superconducting nanoelectromechanical resonators are submerged in superfluid Helium-3 bolometers, cooled to ~ 130 μK , and read out with low-noise quantum sensors. The collaboration also uses the two superfluid phases of Helium-3 to shed light on phase transitions in the early universe. This talk will detail the design of the experiment, commissioning and recent data, with an emphasis on future direct dark matter detection sensitivities.

