APR20-2020-020195

Abstract for an Invited Paper
for the APR20 Meeting of
the American Physical Society

Searching for Particle Dark Matter from eV to GeV with Solid State Detectors

ENECTALI FIGUEROA-FELICIANO, Northwestern University

The search for dark matter has continued to evolve as new detector technologies and capabilities have been proposed and demonstrated, and as theory has focused more attention on dark matter models with dark matter masses on the order of a GeV and below. Results using both nuclear recoils and electron recoils from current experiments including CRESST, DAMIC, EDELWEISS, SENSEI, and SuperCDMS will be presented that place strong constraints on dark matter models with masses from a few GeV all the way down to the eV scales. In the next few years the next generation of experiments will come online increasing the sensitivity in these mass ranges by orders of magnitude. Proposals for new materials and techniques promise more reach and a robust future program of search and discovery in this mass range.