APR21-2021-000716

Abstract for an Invited Paper for the APR21 Meeting of the American Physical Society

New Dark Sector Experiments at Accelerators NHAN TRAN, Fermilab

The program to search for dark matter in the past couple of decades has mostly focused on WIMPs at the GeV - TeV scale. It has made impressive strides in sensitivity but has yet to unearth the particle nature of dark matter. Recently there have been many new initiatives to broaden the search for dark matter, many of them smaller scale experiments. One of the main thrusts of this recent dark matter initiative is to extend searches for dark matter below the GeV-scale using accelerator techniques. I will lay out the various accelerator approaches to look for dark matter in this regime including beam dump and fixed target missing momentum techniques. I will discuss their complementarity with each other and with non-accelerator-based experiments.