MeV-scale BSM Physics at Stopped-Pion Facilities

Friday, 24 March 2023 09:40 (15 minutes)

Stopped-pion facilities pose a unique opportunity to probe new physics at MeV energy scales, a totally different but complementary phenomenology to the usual keV-scale nuclear recoil probes of CEvNS and neutrino NSI. I will discuss searches for axion-like particles and tests of the MiniBooNE excess at Coherent CAPTAIN Mills (CCM) using the 800 MeV proton beam source at the Lujan target (LANL). These searches set a proof-ofconcept for BSM searches at GeV-scale proton beam targets by looking for new physics signatures in the 100 keV to 10 MeV energy range. I will also discuss and hint at some new theoretical thoughts that would apply to neutron sources.

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Session Classification: Experiments