

Theory of Elementary Particles, Astroparticle Physics, and Phenomenology (TEPAPP) Seminar

*Wednesday, October 20th @ 9:00AM
held virtually*

“Cosmological Constraints on Light (but Massive) Relics” Weishuang Linda Xu (UC Berkeley)

Abstract: An intriguing possibility for the particle makeup of the dark sector is that a small fraction of the observed abundance is made up of light, feebly-interacting particle species. Neutrinos, with their yet-unresolved masses, are a concrete example in this category, but more exotic candidates readily arise from new physics scenarios. Due to their weakness of interaction but comparatively large number abundance, cosmological datasets are particularly powerful tools to leverage here. In this talk, I describe the impact of these new particle species on observables, present a comprehensive set of state-of-the-art constraints, and discuss the added power that near future experiments might lend us.