COLLOQUIUM

WISPs, WIMPs, and Gammas: Searches for New Physics with the *Fermi* Large Area Telescope

Speaker MILENA CRNOGORCEVIC (Stockholm University, Sweden)

Abstract In this talk, I highlight two separate campaigns of indirect dark matter and beyond-standard-model (BSM) physics searches with the *Fermi* Large Area Telescope (LAT). First, I discuss the sensitivity analysis using the LAT's low-energy technique to search for light axion-like particles (ALPs) from core-collapse supernovae and their likely consequent gamma-ray burst emission. Second, I focus on the current status of *Fermi*-LAT searches for Weakly Interacting Massive Particle (WIMP) gamma-ray annihilation signals from dwarf spheroidal galaxies. I conclude by discussing the technological innovations and methodological advancements that future gamma-ray observatories will necessitate, emphasizing their potential to provide new insights into the nature of dark matter, axions, and axion-like particles.

24 APRIL 2024

3.00 pm (CEST)

Zoom link: https://stockholmuniversity.zoom.us/j/2461001998