



University
of Victoria

PHYSICS AND ASTRONOMY SEMINAR

(In Person & Online)

Dr. Navin McGinnis (TRIUMF)

“Cosmological challenges for dark sectors with new gauge forces”

Abstract

New gauge forces in nature are among the most well-studied proposed ingredients for particle models of the dark sector. The popularity of such scenarios is driven by the simplicity of the low-energy effective theory needed to describe the associated phenomenology ranging from collider physics, astrophysical systems, and physics of the early universe. However, the origin of the parameters in the effective theory is often overlooked. From this perspective, I will argue that dark sectors with new gauge forces naturally suggest the existence of new heavy particles and discuss the implied challenges for their thermal history in the early universe. Apart from providing a model-building road map for dark sectors, I will also discuss complementary searches for these scenarios at colliders.

Tuesday, February 28, 2023

1:30 p.m. PST in ELL 038

Zoom link available on Uvic Event Calendar