



University  
of Victoria

# PHYSICS AND ASTRONOMY SEMINAR (Hybrid)

**Professor Oliver Kester**  
TRIUMF

“Particle Accelerator driven production of secondary particles  
for fundamental science and applications at TRIUMF”

## Abstract

TRIUMF’s accelerator complex is dedicated to the production of a diverse portfolio of secondary particles. Secondary particles like neutrons, muons or rare isotopes are used to address a variety of fundamental questions, for instance the quest of nuclear physics research to reach an understanding of the structure of nuclei, to determine the origin of the heavy chemical elements in the universe, as well as the underlying forces via precision experiments. At TRIUMF secondary particles are also used for industrial and medical applications.

The production of secondary particle, in particular Rare Isotope Beam (RIB), requires particle accelerator and target systems at the leading edge of present technology. The Ion Separation OnLine (ISOL) method is known for producing highest intensities of rare isotopes and TRIUMF operates the highest power ISOL facility worldwide TRIUMF’s flagship project the Advanced Rare Isotope Laboratory (ARIEL) will allow TRIUMF to triple the RIB delivery hours and stay the most powerful ISOL facility in the future. We will explore some of the challenging technologies employed and developed at TRIUMF and discuss TRIUMF’s research and application portfolio.

Thursday, January 19, 2023

3:30 p.m.

Elliott 061

Online: Zoom link available on [UVic Events calendar](#)