

SEMINAR NOTICE

*Department of Physics and Engineering Physics
University of Saskatchewan*

SPEAKER: Lukas Fehr, PhD candidate, Institute of Space and Atmospheric Studies. Department of Physics and Engineering Physics

TOPIC: *Trace gas retrieval techniques from geostationary orbit.*

DATE: Tuesday February 27, 2024

TIME: 3:30-4:30 p.m.

PLACE: *Physics 103*

Abstract:

Measurement of trace gases in the atmosphere is a crucial activity for monitoring and understanding climate change, for modelling and forecasting air quality, and for constraining models which represent our best understanding of how the atmosphere works. Spaceborne instruments measuring backscattered sunlight play an essential role in this process due to their unmatched spatial coverage. The necessary technology and retrieval techniques have been in use for decades, but the new generation of instruments are pushing the limits of spatial and temporal resolution, leaving room to build upon the established techniques and reexamine their underlying assumptions. This talk will cover the development of radiative transfer computational tools and retrieval techniques with a focus on TEMPO (Tropospheric Emissions: Monitoring of Pollution), a recently launched UV-visible spectrometer in geostationary orbit taking measurements over North America.