

SEMINAR NOTICE

*Department of Physics and Engineering Physics
University of Saskatchewan*

SPEAKER: Kimberlee Dube, PhD Candidate
Physics & Engineering Physics

TOPIC: *Satellite Limb Measurements of Stratospheric NO_x*

DATE: Tuesday January 11th, 2022

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

PLACE: *Webex*

Webex: <https://usask-beta.webex.com/usask-beta/j.php?MTID=m91e8154d69bd90874627143d499f0ea7>

ABSTRACT:

Nitrogen oxides (defined as $\text{NO}_x = \text{NO}_2 + \text{NO}$) are an important component of stratospheric chemistry, particularly as they contribute to depletion of the Ozone layer. Satellite observations of NO_2 have been available since the 1980's, but a complicated photochemical cycle has resulted in the underuse of the data. By applying scale factors computed with a photochemical box model it becomes possible to use data from multiple instruments in order to understand how NO_x varies over time. These improvements to the satellite data record will be discussed, and the data will be used to examine the long-term trend in NO_x , the effect of wildfires on NO_x , and the effect of the Asian summer monsoon on NO_x .