

1. High latitude atmospheric and sea ice data analyses

The atmosphere and Earth's climate are physical systems that undergraduate physics students can investigate while learning about weather and climate, fluid dynamics, numerical modelling, partial differential equations, and analysis of large datasets. For your NSERC USRA, why not use your physics toolkit to study issues related to climate variability and climate change in the EAPP group (<https://www.physics.utoronto.ca/research/eapp>) at the University of Toronto?

This project in the Kushner group (<http://uoft.me/pjk>) deals with polar climate, snow, and sea ice. A key issue for the future of Earth's environment is the evolution of snow and Arctic sea ice and its coupling to global climate. Such coupling relies heavily on accurate representation of snow and sea ice related processes in climate models. In this project, the student will work with Kushner group researchers and researchers at Environment and Climate Change Canada to investigate snow processes and sea ice processes and their connection to atmospheric environmental conditions. Of particular interest will be the study of snowfall extremes and their climate drivers. For example, we will be interested in better understanding atmospheric circulation patterns associated with intensive snowfall events over the Arctic ocean.