

SEMINAR NOTICE

*Department of Physics and Engineering Physics
University of Saskatchewan*

SPEAKER: Brenden Elash, PhD Candidate
Department of Physics & Engineering Physics

TOPIC: *Aerosol Limb Imager: From Concept to Balloon Flight to Results*

DATE: Tuesday, October 6th, 2015

TIME: 3:30-4:30pm.

PLACE: Rm. 103, Physics Building

ABSTRACT:

Sulphate aerosols exist in a layer in the stratosphere with concentrations that can vary greatly due to volcanic eruptions, which can eject large amounts of sulfur into the upper atmosphere. These sub-micron sized droplets scatter incoming sunlight away from the planetary surface causing a cooling effect, which is an important aspect of monitoring global climate change. The Aerosol Limb Imager (ALI) is a prototype satellite instrument that I have designed and developed to retrieve aerosol information by imaging scattered sunlight. The prototype is specifically designed to operate from a stratospheric balloon. An improvement from existing remote sensing instruments is that two dimensional spectral images are acquired through the use of novel filtering technology, an acousto-optic tunable filter, instead of typical altitude profiles obtained from scanning the instrument line-of-sight. The ALI prototype was flown on a stratospheric balloon in Timmins Ontario on September 19, 2014. I will present a brief overview of aerosols, the design process and considerations behind the development of ALI, an overview of the balloon flight, and the results from the balloon flight.

Coffee and Cookies will be served in the Physics lounge at 3:00 pm. for those attending the seminar.