

Physics Department Seminar

Wednesday May 1st, 2013

11:00am in PhSc 130

“Light Imaging, Detection, Ranging and the Polarization Technique”



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Abstract:

Over the last three semesters I have been conducting research involving the polarization technique. This technique gives Lidar the capability to distinguish particle shape, in addition to ranging and/or velocity detection. In order to discuss the importance, practice and complications of this technique, I will start with a review of how traditional Radar and Lidar methods are conducted. My team has investigated the effects on polarization when reflecting off the mirrors of a lidar scanner. An issue occurs when linear polarization is transmitted as elliptical polarization into the atmosphere. Results will be presented on the transmitted polarization for various pointing directions using two different mirror sets. Furthermore, a method to compensate for this induced polarization will be shown.

