<u>Summer Intern Projects 2016</u>

Mark Arend and Fred Moshary

<u>Lidar testing</u>

**Background**: We have two fiber optic based lidar systems that have been under development (a Coherent Doppler lidar and a Direct Detection Lidar) and a newly acquired commercial system that has yet to be tested.  The goal is to continue with the development, operation and analysis of the fiber based systems and to perform tests on the commercial system.   Co-operating these three systems together can be an ultimate goal for the summer.  These can be separated in to three projects where summer students can be exposed to some of the data processing tasks and produce representative figures to compare each of the three instruments.

**Project 1**. Coherent Doppler Lidar system debugging and data analysis.

**CREST student mentor Mamadou Bah**

**Project 2**. Direct Detection Lidar System data analysis and operation

**CREST student mentor Moran Dagan and Selma Dobryansky**

**Project 3.** Initial testing of the new Sigma Space Scanning Lidar System

**Student Mentor Adrian Diaz Fortich**