Lidars in atmospheric science and the development of a new eye-safe aerosol lidar at NCAR

Shane D. Mayor, Ph.D.
(Millersville Meteorology graduate)
Atmospheric Technology Division
National Center for Atmospheric Research
Boulder, CO

Abstract
Lidars operate at a wide variety of wavelengths and each one is built with a special measurement goal in mind. This seminar will begin by reviewing some fundamental types of lidars, the wavelengths they operate at, and some applications in meteorological research. Examples of data will be presented for each type of lidar discussed.

The seminar will then take an in-depth look at the development of a new aerosol backscatter lidar at NCAR. The new system is unique in that it will operate at 1.5 microns. This wavelength enables us to safely transmit very energetic pulses, but it still has some disadvantages due to lack of ideal laser transmitters and the very small active area of currently available photodetectors. Nonetheless, progress is being made, and the seminar will summarize the project’s status.

WHEN: NOON – 12:50 p.m., FRIDAY, APRIL 18, 2003
WHERE: STB-211