Atmospheric lidar

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Lidars or laser radars are increasingly used in the study of atmosphere or for aircraft safety. This tutorial is an introduction to lidar technologies and their applications.

- Overview of various Lidar technologies and configurations for atmospheric applications: coherent and incoherent lidars, elastic and inelastic lidars, differential absorption (DIAL) lidars,...
- a few examples of atmospheric lidar applications: analysis of aerosols, CO2 monitoring, wind profilers, turbulence monitoring,...

Intended Audience

This course is an introduction to lidars for non-specialist students, engineers and researchers willing to have an overview of various lidar technologies and applications.

Biography

Laurent Lombard graduated from the Institute of Optics, France. He defended a PhD thesis in 2005, where he studied various nonlinear wavefront reshaping techniques for beam amplified in strongly multimode fibers. He has been working at Onera since 2006 on high peak power fiber amplifiers and lidar architectures for coherent and incoherent atmospheric lidars.