Special Issue

Atmospheric Applications of Lidar

Message from the Guest Editor

Using laser beams for atmosphere sounding developed soon after the invention of the laser by T. Maiman in 1960. The observation and characterization of aerosols throughout the atmosphere have become common with lidars of growing complexity, now often integrated in networks. The Cloud-Aerosol Lidar and Infrared Pathfinder Satellite Observation (CALIPSO) was launched in 2006 and is still orbiting the earth. Lidar aerosol observations are now used for the forecast of air quality. Doppler lidars were developed in the 80s and 90s for the observation of the wind field in the lower or higher atmosphere. They are now commercially available and widely deployed around the world for the wind energy industry, the surveillance of airports, etc. Lidar for the measurement of vertical profiles of temperature, humidity, concentration of gaseous components of the atmosphere have also been built, envisaged for space missions, and improve thanks to the progress made in the laser and detector technologies. The Special Issue will attempt to give an overview of the latest developments in both the lidar technology and scientific as well as industrial applications for the observation of the atmosphere.

Guest Editor

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About the Journal

Message from the Editor-in-Chief

Continued developments in instrumentation and modeling have driven atmospheric science to become increasingly more complex with a deeper understanding of concepts, mechanisms, and interactions. This is the field that innovation built and it has led to a better appreciation for the complexity with atmosphere. Human life is intertwined in this complexity as we strive to better understand our atmosphere. Climate change is constantly stretching the limits of our thinking and forcing new ideas and concepts to be played out. Welcome to the Anthropocene!

Editor-in-Chief

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