Special Issue

Radar Sensing Atmosphere: Modelling, Imaging and Prediction (2nd Edition)

Message from the Guest Editors

Radar is a powerful tool that can be used to monitor an atmospheric state, which can measure and sense the boundary layer, troposphere, and ionosphere to forecast future weather, even in space. It is very important to measure and monitor the atmospheric state. At present, many radar sensing technologies have been widely used for atmospheric state monitoring, including direct measurements from radar instruments such as weather radars, cloud radars, and wind profile radars, as well as indirect calculations of tropospheric liquid water content (LWC), ice water content (IWC), and ionospheric total electronic content (TEC) using ground radar data. Radar sensing platforms can be implemented on the ground, in the air, in near space, or even on a satellite. In addition, the utilized frequency is also extended from traditional microwave frequency bands to millimeter wave and terahertz, high frequency (HF), and other long-wave frequency bands. In short, the development of the technology and equipment in atmospheric radar detection has exciting prospects. This Special Issue focuses on the latest developments in atmospheric modeling, equipment, and detection methods using radar sensing.

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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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