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 longwave 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.

Guest Editors

Dr. Cheng Wang

Dr. Yifei Ji

Dr. Yong Wang

Deadline for manuscript submissions

30 April 2026



an Open Access Journal by MDPI

Impact Factor 2.3 CiteScore 4.9



mdpi.com/si/228746

Atmosphere
Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
atmosphere@mdpi.com

mdpi.com/journal/ atmosphere





an Open Access Journal by MDPI

Impact Factor 2.3 CiteScore 4.9



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

Dr. Daniele Contini

Institute of Atmospheric Sciences and Climate (ISAC), National Research Council (CNR), Str. Prv. Lecce-Monteroni km 1.2, 73100 Lecce, Italy

Author Benefits

Open Access:

free for readers, with article processing charges (APC) paid by authors or their institutions.

High Visibility:

indexed within Scopus, SCIE (Web of Science), Ei Compendex, GEOBASE, GeoRef, Inspec, CAPlus / SciFinder, Astrophysics Data System, and other databases.

Journal Rank:

CiteScore - Q2 (Environmental Science (miscellaneous))

