



## Radar Sensing Atmosphere: Modelling, Imaging and Prediction

Guest Editors:

**Dr. Xichao Dong**

**Dr. Yuanhao Li**

**Dr. Cheng Wang**

**Dr. Rui Wang**

**Dr. Lorenzo Iannini**

Deadline for manuscript  
submissions:  
**closed (30 August 2022)**

### Message from the Guest Editors

Radar is a powerful tool to monitor an atmospheric state, which can measure and sense the boundary layer, troposphere, and ionosphere to forecast future weather, even in space. Moreover, the obtained atmospheric data can also be used to correct atmospheric errors in remote sensing observations, communication, and navigation systems. At present, many radar sensing technical means for atmospheric state monitoring have been widely used, which includes direct measurements from radar instruments such as weather radars, cloud radars, and wind profile radars and indirect calculations of tropospheric liquid water content (LWC), ice water content (IWC), and ionospheric total electronic content (TEC) using ground radar data. The radar sensing platform can be implemented on the ground, in the air, in the 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, as well as P-band, high frequency (HF), and other long wave frequency bands. This Special Issue focuses on the latest developments in atmospheric modeling, equipment, and detection methods using radar sensing.





## Editor-in-Chief

**Prof. Dr. Ilias Kavouras**

Environmental, Occupational,  
and Geospatial Health Sciences,  
CUNY School of Public Health,  
New York, NY 10027, USA

## 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!

## 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)*)

## Contact Us

---

Atmosphere Editorial Office  
MDPI, St. Alban-Anlage 66  
4052 Basel, Switzerland

Tel: +41 61 683 77 34  
[www.mdpi.com](http://www.mdpi.com)

[mdpi.com/journal/atmosphere](http://mdpi.com/journal/atmosphere)  
[atmosphere@mdpi.com](mailto:atmosphere@mdpi.com)  
[X@Atmosphere\\_MDPI](#)