# Special Issue

# Impact of Atmospheric Aerosols, Clouds, and their Interactions on Radiation and Climate

### Message from the Guest Editors

In this Special Issue, we aim to provide a collection of studies focusing on aerosols, clouds, and radiation, and their interactions. Recent satellite missions are expected to further enhance the understanding of aerosol–cloud interactions that can be coupled with radiation assessments of these phenomena with an in-depth understanding. All studies related to theoretical, experimental, observational, or modelling are welcome for submission. The proposed topics (though not limited to these) are as follows:

Impact of aerosol sources and transport on solar radiation;

Aerosol physical and chemical properties impact on solar radiation;

Aerosol (amount, type, and composition) trends and associated effect on solar energy;

Cloud properties (type, composition, height, etc.) effect on solar radiation;

Aerosols' effect on cloud condensation nuclei, new particle formation, etc., and their combined impact on solar irradiance;

Aerosol/cloud physical, chemical, and radiative property variations during extreme weather events (e.g., wildfires, dust storms, volcanic eruptions, cyclones, and cloudburst).

### Guest Editors

Dr. Akriti Masoom

Physikalisch-Meteorologisches Observatorium Davos, World Radiation Center (PMOD/WRC), Davos, Switzerland

Dr. Panagiotis Kosmopoulos

Institute for Environmental Research and Sustainable Development, National Observatory of Athens, 15236 Penteli, Greece

### Deadline for manuscript submissions

closed (20 February 2025)

**Atmosphere**

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/211688

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

mdpi.com/journal/atmosphere

# Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/journal/atmosphere

# 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))

MDPI