Special Issue

Studying the Effects of Dust on Weather, Climate, and Air Pollution

Message from the Guest Editors

Research on dust aerosols has received more and more attention due to their impact on air pollution, public health, ecosystems, weather and climate. This Special Issue features current efforts towards understanding the effects of dust on weather, climate, and air pollution. Dust aerosols can directly interact with radiation, modifying atmospheric thermal and dynamical structure. In addition, suspended dust particles can serve as both cloud condensation and ice nuclei, thus potentially altering cloud microphysical processes. The effects of dust–radiation–cloud interactions on weather and climate have been studied, but our understanding of how these dust physical processes modify weather and climate is still limited and requires additional investigation. Moreover, dust impacts air quality both in local source regions and in large areas downwind. Dust prediction and observations can help constrain the relative contribution of this important aerosol type to total pollution.

Guest Editors

Prof. Dr. Shu-Hua Chen

Department of Land, Air and Water Resources, University of California, Davis, CA 95616, USA

Dr. Angela Benedetti

Earth System Predictability Section, European Centre for Medium-Range Weather Forecasts, RG2 9AX Reading, UK

Dr. Sara Basart

Barcelona Supercomputing Center, 08034 Barcelona, Spain

Deadline for manuscript submissions

closed (15 November 2019)

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/20675

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

MDPI

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))