Special Issue

The Impacts of Climate Change on Atmospheric Circulations

Message from the Guest Editors

Studies of the impacts of climate change demand that observations and simulations be connected, which itself results from interactions across scales. Statistical and dynamical downscaling, and machine learning all leverage these connections in complementary ways. Attribution studies connect individual events to the new climate we have found ourselves in, and mechanistic studies of circulation change increasingly connect multiple circulation regimes—from the nearly barotropic tropics to the quasi-geostrophic midlatitudes, boundary layer turbulence, and the laminar free atmosphere above. This issue aims to (1) capture the current state of our understanding of the interconnected atmospheric circulation response to global warming, and to (2) highlight key areas where the horizon of our understanding is being advanced. Topics include:

- Arctic–mid-latitude interactions;
- Tropical–extratropical interactions;
- Troposphere–stratosphere interactions;
- Atmosphere–ocean–cryosphere coupling;
- Land–atmosphere coupling, including biosphere–atmosphere coupling;
- Interactions between scales.

Guest Editors

Dr. Paul W. Staten

Dr. Muyin Wang

Dr. Yutian Wu

Deadline for manuscript submissions

closed (24 July 2020)

Atmosphere

an Open Access Journal by MDPI

Impact Factor 2.5
CiteScore 4.6

mdpi.com/si/27565

Atmosphere
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 2.5
CiteScore 4.6

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