# Special Issue

# Current Atmospheric Changes, Projections and Environmental Impacts in the Occidental Southern Polar Region

### Message from the Guest Editor

West Antarctica, especially the Antarctic Peninsula, is one of the regions on Earth where air surface temperatures have experienced warming at higher than global average rates. The overall warming has occurred along with other atmospheric changes in the southern polar region such as cloudiness, precipitation, radiation, and the latitudinal position and intensity of the westerly circulation. As a consequence of these changes, abrupt impacts in the Antarctic's ecosystem and cryosphere have occurred during recent decades, and they are expected to continue in the future. In recent years, observed surface meteorological data, satellite, and atmospheric model data have been used to characterize the Antarctic region's surface climate and to study the atmospheric forcing mechanisms that modify the surface climate variables. Although the efforts mentioned above have improved our understanding of the climate variability and changes in the southern polar region, future projected atmospheric changes and their impacts on the Antarctic's environment remain open questions that need to be addressed.

### Guest Editor

Prof. Dr. Jorge F. Carrasco
Centro de Investigación Gaia Antártica, University of Magallanes, Manuel Bulnes 01855, Punta Arenas, Chile

### Deadline for manuscript submissions

closed (15 September 2022)

**Atmosphere**

an Open Access Journal by MDPI

Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/108907

*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))