Special Issue

Physical Interactions Between Ocean-Atmosphere Boundary Layers from Turbulent to Climate Scales

Message from the Guest Editor

This Special Issue intends to fill in the gaps in the scientific literature regarding the physical processes forcing or impacting the ocean–atmosphere coupling along the vertical path from the top of the MABL to the bottom of the OML in different spatial scales—from the ocean's submesoscale to basin scale—and temporal scales from turbulent to climate. We are seeking to receive new articles aiming, but not limited to, covering the following aspects:

- Novel techniques and methodologies to observe the synoptic-scale coupling between the ocean and the atmosphere;
- Use of regional and global coupled oceanatmosphere models for describing the spatial and temporal variability of the ocean-atmosphere interaction processes;
- Influence of local, regional, and global modes of variability of ocean-atmosphere processes in the weather and climate;
- Teleconnections through different ocean basins and from pole to pole triggered by regional ocean– atmosphere processes;
- Other issues related to the global weather and climate variability related to ocean-atmosphere processes.

Guest Editor

Dr. Ronald B. Souza

Instituto Nacional de Pesquisas Espaciais, Sao Jose dos Campos 12227-010. Brazil

Deadline for manuscript submissions

31 October 2025



an Open Access Journal by MDPI

Impact Factor 2.3 CiteScore 4.9



mdpi.com/si/236789

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

mdpi.com/journal/atmosphere





an Open Access Journal by MDPI

Impact Factor 2.3 CiteScore 4.9



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))

