

## Special Issue

# Effects of Climate Change on Earth's Upper Atmosphere

### Message from the Guest Editor

Climate change has been shown to increase convection and change tidal variability. Changes in tidal forcing from below could produce changes in the variability of the ITM system. Understanding the effects of the forcing from above and below, and how they will influence the detection and prediction of long-term change in the ITM system, is a daunting problem in solar-terrestrial science. This Special Issue will address the following topic: Is there a long-term change in the Earth's upper atmosphere that can be attributed to climate change? Submissions are invited that will address the effect of climate change on the Earth's upper atmosphere, specifically the Ionosphere–Thermosphere–Mesosphere system. Keywords

- Anthropogenic effects
- Thermospheric contraction
- Increased CO<sub>2</sub> cooling
- Space debris in LEO
- Increased debris lifetime
- Lower atmosphere forcing
- Tidal and wave forcing of upper atmosphere

---

### Guest Editor

Dr. Amal Chandran

Satellite Research Centre, School of Electrical and Electronic Engineering, Nanyang Technological University, Nanyang 639798, Singapore

---

### Deadline for manuscript submissions

closed (15 September 2019)



## Atmosphere

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.3  
CiteScore 4.9



[mdpi.com/si/23758](https://mdpi.com/si/23758)

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

[mdpi.com/journal/  
atmosphere](https://mdpi.com/journal/atmosphere)





# Atmosphere

---

an Open Access Journal  
by MDPI

---

Impact Factor 2.3  
CiteScore 4.9



[mdpi.com/journal/  
atmosphere](https://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))