



## Effects of Climate Change on Earth's 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)**

### 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





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## 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

## 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!

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Atmosphere Editorial Office  
MDPI, Grosspeteranlage 5  
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