



Environmental Effects of Stratospheric Ozone Depletion, UV Radiation and Interactions with Climate Change

Guest Editors:

Dr. Dong Guo

School of Atmospheric Science,
Nanjing University of Information
Science and Technology, Nanjing
210044, China

Dr. Yajuan Li

School of Electronic Engineering,
Nanjing Xiaozhuang University,
Nanjing 210017, China

Dr. Shujie Chang

College of Ocean and
Meteorology, Guangdong Ocean
University, Zhanjiang 524088,
China

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Message from the Guest Editors

Increases of ozone-depleting substances (ODSs) in the atmosphere have led to stratospheric ozone depletion and the ozone ‘hole’. Climate change will also affect clouds, surface reflectivity at high latitudes, where changes in sea ice and snow cover are expected, and aerosols near the Earth’s surface. The combined effects of changes in ozone, aerosols, clouds, and reflectivity will determine future levels of UV-B radiation at the Earth’s surface.

This special issue focuses on findings of current and projected interactive environmental effects of stratospheric ozone depletion, solar UV radiation, and climate change. These effects include those on atmosphere and air quality, human health, terrestrial and aquatic ecosystems, biogeochemical cycles, solar energy technologies, and materials used in construction and other services. We also focus on the assessment of the resulting changes in stratospheric ozone, UV radiation and climate, regarding the effects on humans and the environment, including recent unexpected events, such as the COVID-19 pandemic and unprecedented increases in UV radiation over the Arctic in 2020 due to stratospheric ozone depletion.





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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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Contact Us

Atmosphere Editorial Office
MDPI, Grosspeteranlage 5
4052 Basel, Switzerland

Tel: +41 61 683 77 34
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