Special Issue

Solar Radiation, Aerosol, and Multiple Interactions Between Solar Radiation and Atmospheric Substances

Message from the Guest Editors

Solar radiation plays a vital role in the atmosphere, biosphere, hydrosphere, lithosphere, and their interactions on Earth. Solar radiation controls climate change and ecosystem evolution; in turn, the changes in the atmosphere, ecosystem, and land also influence solar radiation transfer in the atmosphere, along with regional and global climate and climate change through multiple interactions.

It is particularly important to study the variability of atmospheric constituents, including aerosols, clouds, polluting gases and particles, as well as their interactions and effects on solar radiation.

To better understand the carbon balance in ecosystems and its roles in climate change, it is necessary to study all components of carbon exchange and their driving factors, along with their variations at different time scales. Recently, surface and satellite observations and model studies have been reliably effective tools to thoroughly study the above natural processes, interactions, and mechanisms.

The purpose of this Special Issue is to collect current studies concerning the above associated issues to improve understanding of solar radiation, atmosphere, biosphere, land, and climate.

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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

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