Special Issue

Radiation and Radiative Transfer in the Earth Atmosphere

Message from the Guest Editor

Electromagnetic radiation is the most important process responsible for energy transfer in the atmosphere and plays many important roles in controlling the environment and climate. It is closely associated with the investigation of atmospheric greenhouse effects resulting from external radiative perturbation in climate systems and the development of methodologies for inferring atmospheric and surface parameters by means of remote sensing. This Special Issue is expected to provide a summary of recent accomplishments in the study, understanding, and quantitative analysis of atmospheric radiation and the interactions of solar and terrestrial radiation with molecules, aerosols, and cloud particles in the Earth's atmosphere, as well as with its surface, through radiative transfer and radiometric observations made from the ground, the air, and space. Therefore, we invite authors to submit original research and review articles that aim to advance the theory of radiative transfer, to study the diverse impacts of electromagnetic radiation and to apply radiative transfer in satellite data assimilation systems for improving weather and climate predications.

Guest Editor

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Deadline for manuscript submissions

closed (31 January 2022)

Atmosphere

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Impact Factor 2.3
CiteScore 4.9

mdpi.com/si/94108

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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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