



## Effects of Cosmic Ray Variability on Earth Environment

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### Message from the Guest Editor

As the energy of cosmic ray particles is lost when exciting and ionizing atoms in the atmosphere, it is expected that this effect should be more important during the period of minimum activity. It has been shown that the total cloudiness and precipitation is reduced when cosmic rays flux in the interplanetary space, and the atmosphere decreases. Recent studies and reconstruction/modeling of past climate changes revealed a clear association with cosmic ray variation recorded in cosmogenic isotope archives.

This Special Issue offers authors an opportunity to publish articles on the link between cosmic ray variation (on multiple time-scales) and changes in various aspects of the Earth's atmosphere. The effects that took place in the past (remote or recent) could help us understand the present and provide enough information to help us in the future. As mankind continues to conquer space, we will increasingly need to perceive how space climate and space weather can affect our activities.





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## 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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