Special Issue

The Influence of Solar Cyclicity on the Earth's Climate

Message from the Guest Editor

The Special Issue is open to studies that consider the effects of the decadal and longer solar cycles on the Earth's climate characteristics. Studies clarifying different aspects of the mechanism of solar variability's influence on atmospheric processes are also welcomed.

The Sun is known to be the main energy source for the Earth's atmosphere. However, the role of solar cyclic variability in the formation of the Earth's climate has not been studied enough. The problem of solar variability's influence on the Earth's climate has taken a special meaning in recent years due to lively debates about possible reasons for Global Warming.

On the other hand, the mechanism of the formation of the Earth's atmosphere response to solar variability also remains not quite understood. The Sun can affect the terrestrial atmosphere in different ways, including variations in total and ultraviolet solar irradiance, fluxes of energetic particles , disturbances in the solar wind and interplanetary magnetic fields. The contributions of these factors in the overall response of the atmosphere to solar cyclic variability also need to be investigated.

Guest Editor

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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!

Editor-in-Chief

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