



State-of-the-Art in Gravity Waves and Atmospheric-Ionospheric Physics

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Message from the Guest Editors

Atmospheric gravity waves are the subject of increased interest in observational and theoretical studies in atmospheric physics. These waves are generated under various helio-geophysical conditions and play an important role in the lower and upper atmosphere coupling, as well as the upper atmosphere-ionosphere interaction.

Generation, propagation, nonlinear decay and dissipation of atmospheric gravity waves, as well as interaction with the mean flow, occurs during planetary waves, tidal motions and other coupled small and planetary scale phenomena. Taking these processes into account is important for modeling the effects of gravity waves on the global circulation process.

The manuscripts concerning the above-described studies and similar observational, theoretical and model studies of atmospheric processes coupled with atmospheric gravity waves are welcome in this Special Issue. Studies of these waves in the atmospheres of other planets are also welcome.





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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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