



Statistical Analysis of Geomagnetic Storms Impact on the Atmosphere-Magnetosphere-Ionosphere System

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Message from the Guest Editor

Geomagnetic storms are one of the main factors of Space Weather. The storms significantly influence on the interconnected dynamical system of the Earth magnetosphere-atmosphere-ionosphere and result in deteriorated operation of global navigation satellite systems (GNSS), radar systems, and communication systems. Development of observational facilities allowed obtaining long term data sets. In addition to classical ionosonde, radar and GNSS observations, we have high-rate those as well as radio occultation and in-situ measurements from satellite missions.

This Special Issue is devoted to statistical studies of geomagnetic storm effects on the atmosphere, ionosphere, and magnetosphere. Seasonal and solar cycle features in different parameters, as well as regional peculiarities of storm response are of particular interest. Special attention is devoted to statistical characteristics of storm occurrence, estimates of typical responses, as well as finding new classifications and indexes. Advances are considered in modeling the geomagnetic storm response and storm influence on technical systems.





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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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