



GNSS Applications in Meteorology: Recent Trends, Current Progress and Future Directions

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Message from the Guest Editors

Many challenges remain in the development of GNSS meteorology, such as the unstable quality of GNSS data under extreme conditions, the need to improve multi-source meteorological factor utilization capability and to construct a GNSS water vapor lamination model, and the high false-alarm rate of extreme weather forecast models based on GNSS data. Therefore, the main objective of this Special Issue is to introduce recent advances and research achievements in GNSS technology in meteorology. We welcome original research on topics including, but not limited to:

- High-precision inversion of multi-type GNSS atmospheric parameters;
- GNSS three-dimensional water vapor modeling;
- Comprehensive utilization of multi-source water vapor;
- Short-term forecast of extreme meteorological events;
- Climate change analysis;
- GNSS data assimilation and application;
- Ionospheric electron content monitoring;
- Climate monitoring base on ground-based GNSS;
- GNSS radio occultation;
- GNSS reflection-signal atmospheric detection;
- Ground and high-altitude meteorological detection.





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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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