

Special Issue

Monitoring of Ionospheric Perturbations

Message from the Guest Editors

- This Special Issue of *Atmosphere* focuses on recent methodological advances and observational campaigns designed to characterize dynamic variations in Earth's ionosphere.
- Contributions are welcome from studies employing a variety of observational platforms, including, but not limited to, GNSS receiver networks, ionosondes, radars and low Earth orbit satellites. Emphasis will be placed on innovative sensors, multi-instrument integration and deployment strategies that improve spatiotemporal resolution and anomaly detection. Interdisciplinary approaches combining data assimilation, machine learning and physics-based and numerical modeling are encouraged. Case studies of extreme space weather events impacting the ionosphere and ionosphere–atmosphere coupling will provide valuable insights.
- This issue will feature articles summarizing the current understanding of ionospheric perturbations, their monitoring techniques and forecasting methodologies. Contributions of papers that address the challenges of integrating disparate datasets from multiple sources and those that characterize various ionospheric parameters (e.g., particles and electromagnetic fields) are also encouraged.

Guest Editors

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About the Journal

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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