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Advances in the Use of Crowdsourced Data in Numerical Weather Prediction

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Deadline for manuscript submissions:
closed (25 February 2022)

Message from the Guest Editors

Dear Colleagues,

As the spatial resolution of numerical weather prediction (NWP) models increases steadily so does the need for weather observations for data assimilation or validation purposes. Since the installation and maintenance of new professional meteorological observing equipment is costly and expensive, it is much more convenient to exploit existing information with observations from non-conventional sources. Examples of data sources include smartphones, personal weather stations, cellular communication networks, and vehicles. Although they are much more available, such data are often less accurate and representative than traditional meteorological observations; therefore, quality control is crucial when using crowdsourced data. The ultimate goal is the improvement of nowcasting forecasts of hazardous weather.

This Special Issue aims to give an overview of the sources of non-conventional data and provide a focus on their use in the most recent NWP applications. Manuscripts on all aspects of crowdsourced data are welcome for this Special Issue, including case studies, measurement campaigns, validation, and data assimilation.

Guest Editors

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Editor-in-Chief

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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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