Special Issue

Non-stationarity (Seasonality and Trends) in Time Series of Meteorological Extreme Events

Message from the Guest Editors

Meteorological observations indicate that climate warming has grown worse in recent decades. It manifests in the increasingly frequent occurrence of extreme meteorological phenomena, including heat waves, intensive precipitation, and dry spells. Not only their frequency, but also their duration and intensity have increased in recent decades. A similar trend of changes is estimated for the next decades of the 21st century. At the same time, the aforementioned changes are accompanied by a decrease in the frequency of cold waves, including cold spells. As theoretical tools for analysis of meteorological extreme event time series usually require their specific characteristics, strengthening of non-stationarity because of seasonality and trends becomes a big challenge, including estimation of their outlooks for future. This issue will give preference to studies of any extreme meteorological phenomena, including air temperature and precipitation time series extremes, preferably using probability distributions adopted for a study of historical time series of extreme meteorological events under conditions of non-stationarity.

Guest Editors

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Deadline for manuscript submissions

closed (31 March 2023)



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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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