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# Evapotranspiration Observation and Prediction: Uncertainty Analysis

Guest Editor:

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## Message from the Guest Editor

Evapotranspiration (ET) is a key component of the water balance and the energy budget of land surfaces. ET can be modeled from land surface models (LSMs), which describe the vertical exchange of energy and mass between soil, vegetation, and atmosphere. Uncertainties in simulated ET can be attributed to the following three components: (1) model structure, (2) model parameters, and (3) errors in the climate and the surface variables used to drive the model and to integrate it spatially. The identification of the most influential sources of uncertainty in the representation of the spatiotemporal dynamic of ET is a crucial aspect to reduce the uncertainty in the prediction of the long-term evolution of the terrestrial water cycle and the land–atmosphere interactions.

This Special Issue is focused on the uncertainty analysis in ET predictions from a local to a global scale. It offers an opportunity to publish articles on the quantification of uncertainties in the simulation of ET fluxes, to identify possible shortcomings in the representation of key processes, and to analyze the impact of ET uncertainties on the prediction of atmospheric variables.

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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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