Special Issue

Earth System Energy Budget and Climate Change

Message from the Guest Editor

The energy budget imbalance of the Earth system is closely linked to climate change, and the net energy input will warm the system. The interactions between components of the climate system will redistribute the energy tempospatially. Although great progress has been achieved in the quantitative calculations of the energy budget and energy transports in the climate system, there are still large uncertainties and discrepancies between observations, numerical simulations, and re-analyses. Therefore, we are pleased to organize this Special Issue entitled “Earth System Energy Budget and Climate Change”. Papers related to the following areas are welcome:

- Radiative fluxes at the top of the atmosphere;
- Energy accumulation and transport in the atmosphere;
- Surface heat fluxes;
- Heat storage and transport in the oceans;
- Energy budget imbalances in the Earth system;
- Direct and indirect validations of the energy fluxes;
- Consistency between observations and numerical simulations;
- Physical processes related to energy change, storage, and transport;
- Interactions between different scales.

Guest Editor

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Deadline for manuscript submissions

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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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