

Advances in Atmospheric Sciences

Special issue:
Antarctic Meteorology and Climate: Past, Present and Future

Call for papers

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Scope:

The Antarctic, including the continent of Antarctica and the Southern Ocean, is a critically important part of the Earth system. Scientific research in the Antarctic has always been, and remains, a challenging endeavor. The ongoing effort of the Year of Polar Prediction (YOPP) in the Antarctic provides a stimulus for a focused research effort on Antarctic meteorology and climate, i.e., a special observing period will take place from mid-November 2018 to mid-February 2019, which will have intensified research activities, including enhanced synoptic observations. More comprehensive and precise observations, increased computing power and improving understanding of Antarctic meteorology and climate, suggest that we expect that coupling of the atmosphere, ocean and sea ice in numerical weather prediction will be achieved with sufficient skill as to become operational in coming years. Climate change research in the Antarctic is comparatively neglected compared to that of the Arctic. However, it is clear that climate change is already impacting the Antarctic, such as warming of the Antarctic Peninsula and Antarctic Circumpolar Current, increasing of the overall Antarctic sea ice, and accelerating ice loss from the Antarctic ice shelf/sheet.

Studying climate change in the Antarctic is important, which enables us to predict future climate change more accurately and provide information to policy makers. This special issue will showcase recent and ongoing research progress in 1) Antarctic meteorology and numerical weather prediction and 2) climate variability and change in the Antarctic. The compilation of research papers in this special issue is expected to contribute to a more thorough understanding of issues in Antarctic meteorology and climate in the past, present and future. Submissions in, but not limited to, the following research areas, are invited:

- Antarctic meteorology and numerical weather prediction
- Observations in the Antarctic from various field campaigns and remote sensing
- Explore the ways in which the Antarctic atmosphere (including stratosphere) interacts with the ocean, sea ice, and the global climate system
- Observational evidence of variability and change in Antarctic climate
- Determine possible causes of climate variability and change identified in the Antarctic using observational analysis and climate model simulation
- Past Antarctic climate variability and change at regional and continental scales

Important dates:

Manuscript submission open: March 1, 2019

Manuscript submission deadline: August 31, 2019.

Estimated publication time: January 2020.

Submission URL: <https://mc03.manuscriptcentral.com/aasiap>

Please select: "Special issue: Antarctic"

Please refer to the Author Guide (<http://159.226.119.58/aas/EN/column/column315.shtml>) for an MS Word template, Endnote reference style, and more detailed style instructions.

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