Call for Papers:

"Special Edition on the Frontier of Atmospheric Science with High Performance Computing"

in *Journal of the Meteorological Society of Japan (JMSJ)*
and *Scientific Online Letters on the Atmosphere (SOLA)*

Many simulation studies in meteorology, oceanography, atmospheric chemistry, and other related sciences have been conducted using high-performance computing (HPC) technology, including the super computer "Fugaku". The advent of such HPC facilities has contributed to significant progress in atmospheric science by allowing for super-high resolution simulations, large ensemble simulations, and assimilation of observational big data. As a Japanese flagship computer, the super computer "Fugaku" began its operation in 2020, and has been creating significant outcomes ever since.

Reflecting the worldwide rapid development of HPC facilities and high-resolution models, 13 members now take part in DYAMOND2, an HPC project for intercomparison of sub-5km mesh global models. With 4 of the members being coupled to a full-3D dynamical ocean, multi-decadal-scale climate calculation is now becoming a realistic target. Deep understanding of the roles and behaviors of explicit convection in the model climate system is a key toward such calculations. They are now being studied intensely, taking advantage of the wide variety of the participating models.

The 6th International Workshop on Nonhydrostatic Models will be held in Hokkaido, Japan, from 31 August to 2 September 2023. Its aim is to present studies related to nonhydrostatic models and their application to numerical weather prediction and climate studies. This workshop addresses all aspects of nonhydrostatic models, from large-eddy simulation models to nonhydrostatic global models, and it includes dynamical frames, physics, and data assimilation. Future high-performance computing for meteorological and climate research is one of its great focuses.

This special edition accepts papers on meteorology, climate change, and environmental science with high-performance computing technology.

About submission

Please read carefully Instructions for the authors shown at
(JMSJ) http://jmsj.metsoc.jp/instructions.html
(SOLA) https://www.metsoc.jp/sola/instruction.html
and submit the manuscripts on the online submission system:
(JMSJ) https://mc.manuscriptcentral.com/jmsj
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Choose 'Special_HPC' during the submission process. Please also mention that your submission is for "HPC" in the cover letter. [this is not yet reflected on the system]
The submitted manuscripts follow ordinary review procedures. The authors can choose their preferred editor-in-charge among the editors for this special edition. Those papers that are not in time for submission or publication in the special edition may be considered for publication in ordinary issues.

Important dates

Deadline of submission: November 30 2024   (closed)
Publication: (JMSJ) In regular issues of 2023-2025 (special collection on web)
          (SOLA) In special editions of 2023-2025

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